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- 1. Which of the following types of necrosis is grossly opaque and chalky white:
  - a) Coagulation necrosis.
  - b) Liquefaction necrosis.
  - c) Caseous necrosis.
  - d) Fat necrosis.
  - e) Gangrenous necrosis.

Key: d

### Ref: Cell Injury, Death and Adaptation.

## 2. Which of the following types of necrosis is most commonly associated with ischaemic injury:

- a) Coagulative necrosis.
- b) Liquifactive necrosis.
- c) Caseous necrosis.
- d) Fat necrosis.
- e) Gangrenous necrosis.

#### Key: a

### Ref: Cell Injury, Death and Adaptation.

#### 3. Dystrophic calcification is most closely associated with:

- a) Hypercalcaemia.
- b) Necrosis.
- c) Chronic irritation.
- d) Diminished blood flow.
- e) Increased work load.

Key: b

### Ref: Cell Injury, Death and Adaptation.

### 4. Localized area of ischaemic necrosis is mostly associated with:

- a) Ascitese.
- b) Petechiae.
- c) Infarction.
- d) Emboli formation.
- e) Hematoma.

Key: c

### Ref: Cell Injury, Death and Adaptation.

### 5. Metabolism is most closely associated with:

a) Diminished blood supply.

- b) Increased work load.
- c) Necrosis.
- d) Chronic irritation.
- e) Hypercalcemia.

Key: d

Ref: Cell Injury, Death and Adaptation.

### 6. Which of the following is a reversible change:

- a) Karyorrhexis.
- b) Pyknosis.
- c) Karyolysis.
- d) Swelling of endoplasmic reticulum.
- e) Gangrenous necrosis.

Key: d

### Ref: Cell Injury, Death and Adaptation.

## 7. After initiation of an acute inflammatory process third in a sequence of changes in vascular flow is:

- a) Vasoconstriction.
- b) Redness.
- c) Leukocytic migration.
- d) Vasodilation.
- e) Slowing of the circulation.

Key: d

### Ref: Acute and Chronic Inflammation.

- 8. Which of the following are thought to mediate, many of the systemic effects of inflammation are chemotactic and stimulate adhesion molecules:
  - a) Interleukin 1 (IL-1) and tumor necrosis factor.
  - b)  $C_{5a}$  and leukotriene B-4.
  - c) C<sub>3b</sub>.
  - d) Leukotriene  $C_4$ ,  $D_4$  and  $E_4$ .
  - e) Bradykinin.

Key: a

### Ref: Acute and Chronic Inflammation.

## 9. Which of the following is the hallmark of acute inflammation:

- a) Neutrophils.
- b) Connective tissue.
- c) Macrophages.
- d) Granulation tissue.
- e) Granuloma formation.

Key: a

## Ref: Acute and Chronic Inflammation.

## 10. Granuloma formation is most frequently associated with:

- a) The healing process.
- b) Acute inflammation.
- c) Wound contraction.
- d) Fibroblasts and neovascularization.
- e) A persistent irritant.

Key: e

## Ref: Acute and Chronic Inflammation.

## 11. Morphologic changes seen in chronic non-specific inflammation include an increase in:

- a) Neutrophils, lymphocytes and liquefaction necrosis.
- b) Neutrophils, macrophages and fibrosis.
- c) Lymphocytes, plasma cells and fibrosis.
- d) Giant cells, macrophages and coagulative necrosis.

Key: c

## Ref: Acute and Chronic Inflammation.

## 12. Caseation necrosis is most characteristic of:

- a) Acute myocardial infarction.
- b) Tuberculosis.
- c) Acute pancreatitis.
- d) Cerebral infarct.
- e) Pulmonary pneumoconiosis.

Key: b

### Ref: Acute and Chronic Inflammation.

### 13. The most characteristic feature of granulation tissue is the:

- a) Growth of fibroblasts and new capillaries.
- b) Resemblance to a granuloma.
- c) Character of the exudate.
- d) Granular scar that results.
- e) Presence of monocytes and fibroblasts.

Key: a

Ref: Healing and Repair.

# 14. The growth factor elaborated by macrophages, which recruits macrophages and fibroblasts to wound site and induces all steps in angiogenesis is:

- a) Vascular endothelial growth factor.
- b) Fibroblast growth factor.
- c) Epithelial growth factor.
- d) Platelet derived growth factor.
- e) Endostatin.

Key: b

Ref: Healing and Repair.

- 15. A young man of 20, got a lacerated wound on his left arm, stiched-1 week later sutures were remained-healing continued but the site became disfigured by prominent raised irregular nodular scar, in next 2 months which of the following best describes the process:
  - a) Organization.
  - b) Dehiscence.
  - c) Resolution.
  - d) Keloid formation.
  - e) Secondary union.

### Key: d

Ref: Healing and Repair.

- 16. If a rare disorder with an early onset in life is inherited in such a way that male and female offsprings are equally affected, only homozygous persons are affected, then the mode of inheritance would be:
  - a) Autosomal dominant.
  - b) Autosomal recessive.
  - c) X-linked dominant.
  - d) X-linked recessive.
  - e) Mitochondrial inheritance.

Key: b

Ref: Genetic Disorders.

- 17. A six months old baby with blue eyes, decreased pigmentation of hair and skin and a strong mousy odour is brought to you-on examination there is severe mental retardation. What will be the enzyme deficiency:
  - Homogentisate oxidase. a)
  - Phenyl Alanine oxidase. b)
  - c) P-hydroxyphenyl pyruvate hyroxylase.
  - d) Tyrosinase.
  - e)  $\alpha$ -glucocerebrosidase.

Key: b

**Ref: Genetic Disorders.** 

- A 39 years old male developed a testicular mass which was 18. removed and was sent for pathological examination, along with additional studies. Which of the following is the most compelling evidence that the lesion is malignant:
  - Cells of the mass infiltrate a narrow band of the tuinea a) albuginea.
  - b) Two mitosis are found in every (HPF) high power field of microscope.
  - c) Nuclei are viable in size and tend to stain.
  - d) X-ray shows 2 round nodules in the left lung field and one in the right, were not present 2 years ago.
  - e) The patient is found to be infertile.

Key: d

Ref: Neoplasia.

#### 19. Which of the following pair does not correctly match the tumor with its causative agent:

- Anagenital carcinoma Burkitts lymphoma a)
- b)
- c)
- HPV (Type 16 & 18). - EBV.
- Hepatocellular carcinoma- Hepatitis A virus.Carcinoma stomach- Helicobacter pylori. d)
- e) Squamous cell carcinoma skin – Ultraviolet radiation.

Key: c

Ref: Neoplasia.

#### 20. Which of the following terms refer to a malignant tumor of mesenchymal origin:

- a) Carcinoma.
- b) Hepatoma.
- c) Hematoma.
- d) Sarcoma.
- e) Teratoma.

Key: d

Ref: Neoplasia.

#### 21. Grading of cancer is based on which of the following statements:

- a) Size of the primary tumor.
- Spread of cancer cells to regional lymph nodes. b)
- Presence of blood born metastasis. c)
- Degree of differentiation of tumor cells, anaplasia and no. of d) mitosis.
- Presence of capsular invasion by tumor cells. e)

Key: d

Ref: Neoplasia.

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## 22. The chemical carcinogen, aflatoxin B-1 derived form a fungus, which contaminates grain foods most commonly induces:

- a) Transitional cell carcinoma of lung.
- b) Adenocarcinoma of rectum.
- c) Squamous cell carcinoma of skin.
- d) Hepatocellular carcinoma.
- e) Renal cell carcinoma.

Key: d

### Ref: Neoplasia.

### 23. Which of the following is not a malignant tumor:

- a) Glioma.
- b) Lymphoma.
- c) Melanoma.
- d) Leiamyoma.
- e) Medulloblastoma.

Key: d

### Ref: Neoplasia.

## 24. Which of the following are most frequent site of venous thrombosis?

- a) Veins of lower extremity.
- b) Pelvic veins.
- c) Portal vein.
- d) Hepatic vein.
- e) Pulmonary veins.
- Key: a

Ref: Haemodynamic Disorders.

## 25. In a state of shock there is:

- a) A decreased hydrostatic pressure and increased osmotic pressure.
- b) Cardiovascular collapse.
- c) Active process leading to increased volume of blood.
- d) Decreased pulse rate.
- e) Fever.

Key: b

### Ref: Haemodynamic Disorders.

### 26. The main factor responsible for world wide distribution of Entamoeba histolytica is:

- a) Extreme antigenic variation.
- b) Usual stability of its cysts in the environment.
- c) Wide spread distribution of mosquitoes.
- d) Usual motility of trophoziotes in contaminated water.
- e) Poor hygienic conditions of individuals.

Key: b

## Ref: Parasitology.

## 27. All of the following characteristics are seen in the stool of Amoebic dysentery except one:

- a) RBCs in clumps.
- b) Charcat leyden crystals.
- c) Eosinophyls.
- d) Ghost cells.
- e) Macrophages.

Key: d

Ref: Parasitology.

### 28. Parasite induced pernicious anaemia is caused by:

- a) Taenia saginata.
- b) Taenia solium.
- c) Diphyllabothrium latum.
- d) Echinococcus granulosus.
- e) Hymenolepis nana.

Key: c

Ref: Parasitology.

## 29. In malaria the form of plasmodium transmitted to man from mosquito is:

- a) Sporozoites.
- b) Gametocytes.
- c) Merozoites.
- d) Trophazoites.
- e) Schizonts.

Key: b

### Ref: Parasitology.

## 30. The host that harbours the adult or sexually mature, parasite is called:

- a) Intermediate host.
- b) Commensal host.
- c) Symbiotic host.
- d) Reservoir host.
- e) Definite host.

Key: e

Ref: Parasitology.

## 31. Which of the following statements is not correct regarding Hookworm infestation:

- a) Hookworm infection causes anaemia.
- b) Man acquires infection when filariform larvae penetrate skin.
- c) Hookworm infection may sometimes be acquired by oral route.
- d) Larva passes through human lung during its life cycle.
- e) Hookworm infection can be diagnosed by finding trophozoites in the stool.

Key: e Ref: Parasitology.

## 32. Which of the following bacterial substance binds to the Fc portion of immunoglobulin molecules:

- a) Endotoxin.
- b) Coagulase.
- c) Lipotheichoic acid.
- d) M. protein.
- e) Protein A.

Key: e

## Ref: Virology.

## 33. Which of the following is associated with a deficiency of third component of complement $C_3$ :

- a) Pyogenic infection.
- b) Immune complex disease.
- c) Systemic lupus erythematosus.
- d) Glomerulonephritis.
- e) Xeroderma pigmentosum.

Key: a

### Ref: Virology.

- 34. Which of the following components enhances the binding of antigen antibody complex to macrophages:
  - a) C1.
  - b) C3a.
  - c) C3b.
  - d) C8.
  - e) Cb6,7 complex.

Key: c

#### Ref: Virology.

### 35. A secretary piece is attached to IgA:

- a) In plasma cells.
- b) In epithelial cells.
- c) By enzyme in mucous secretion.
- d) By T-cells.
- e) By macrophages.

Key: b

Ref: Virology.

### 36. Two tests are used to detect the presence of HIV infections are:

- a) Agglutination and neutralization reactions.
- b) Compliment fixation and immunoflorescence tests.
- c) ELIZA and Western Blotting.
- d) Haemagglutination and Coamb's Test.
- e) Indirect haemagglutination and Western Blotting.

Key: c

Ref: Virology.

### 37. General steps in viral multiplication cycle are:

- a) Adsorption, penetration, replication, maturation and release.
- b) Endocytosis, uncoating, replication, assembly and budding.
- c) Adsorption, uncoating, duplication, assembly and lysis.
- d) Endocytosis, penetration, replication, maturation, exocytosis.
- e) Adsorption, replication, uncoating and release.

Key: b

Ref: Virology.

# 38. Which of the following serum component is an indicator of post infection and subsequent immunity to hepatitis B-viral infection:

- a) HBS Ag.
- b) HBC Ag.
- c) HBe Ag.
- d) Anti HBS.
- e) Anti HBC.

Key: d

Ref: Virology.

## 39. Which of the following conditions is not rightly against its causative agent:

- a) Squamous cell carcinoma cervix = HPV (16, 18).
- b) Nasopharyngeal carcinoma = EBV.
- c) Cutaneous warte, (squamous cell papilloma) = HPV (12, 4, 7).
- d) Hepatocellular carcinoma = HDV.
- e) Gastric lymphoma = H. Pylori.

Key: d

Ref: Virology.

### 40. Which of the following is a RNA virus:

- a) Human papilloma virus.
- b) Human T-cell leukaemia virus.
- c) Hepatitis B virus.
- d) Epstein Barr virus.
- e) Cytomegalo virus.

Key: b

Ref: Virology.

## 41. The antiphagocytic property of the group A streptococcus is associated with which of the following:

- a) Hyaluromidase.
- b) Streptolysin S.
- c) M. protein.
- d) Peptidoglycan.
- e) C carbohydrate.

Key: c

#### Ref: Microbiology (General and Systemic).

## 42. Which of the following is correct sequence of steps in performing Gm. Stain:

- a) Safranin stain, crystal violet stain, iodine solution.
- b) Crystal violet stain, decolorization, safranin stain, iodine solution.
- c) Safranin stain, iodine solution, decolorization, crystal violet stain.
- d) Crystal violet stain, iodine solution, decolorization, safranin stain.
- e) Iodine solution, crystal violet, decolorization, safranin.
- Key: d

### Ref: Microbiology (General and Systemic).

## 43. The most reliable method for diagnosis of primary syphilis is the:

- a) VDRL Test.
- b) FTA-ABS.
- c) Microhemagglutinine.
- d) Dark field examination of chancre material.
- e) Treponema pallidum immobilization test.

Key: c

Ref: Microbiology (General and Systemic).

## 44. The pathogenisis of which of the following organisms is most likely to involve invasion of the intestinal mucosa:

- a) Vibrio chalerae.
- b) Enteroloxigenic E. coli.
- c) Shigella somei.
- d) Clostridium botulinum.
- e) Pseudomonas aerogenosa.

Key: c

### Ref: Microbiology (General and Systemic).

## 45. Which of the following tests does not correspond with the respective disease:

- a) Casoni's Test for Hydatid disease.
- b) Frei's Test in Infectious mononuclease.
- c) Schick's Test for Diphtheria.
- d) Wasserman's Test for syphilis.
- e) Widal Test for typhoid.

Key: b

Ref: Microbiology (General and Systemic).