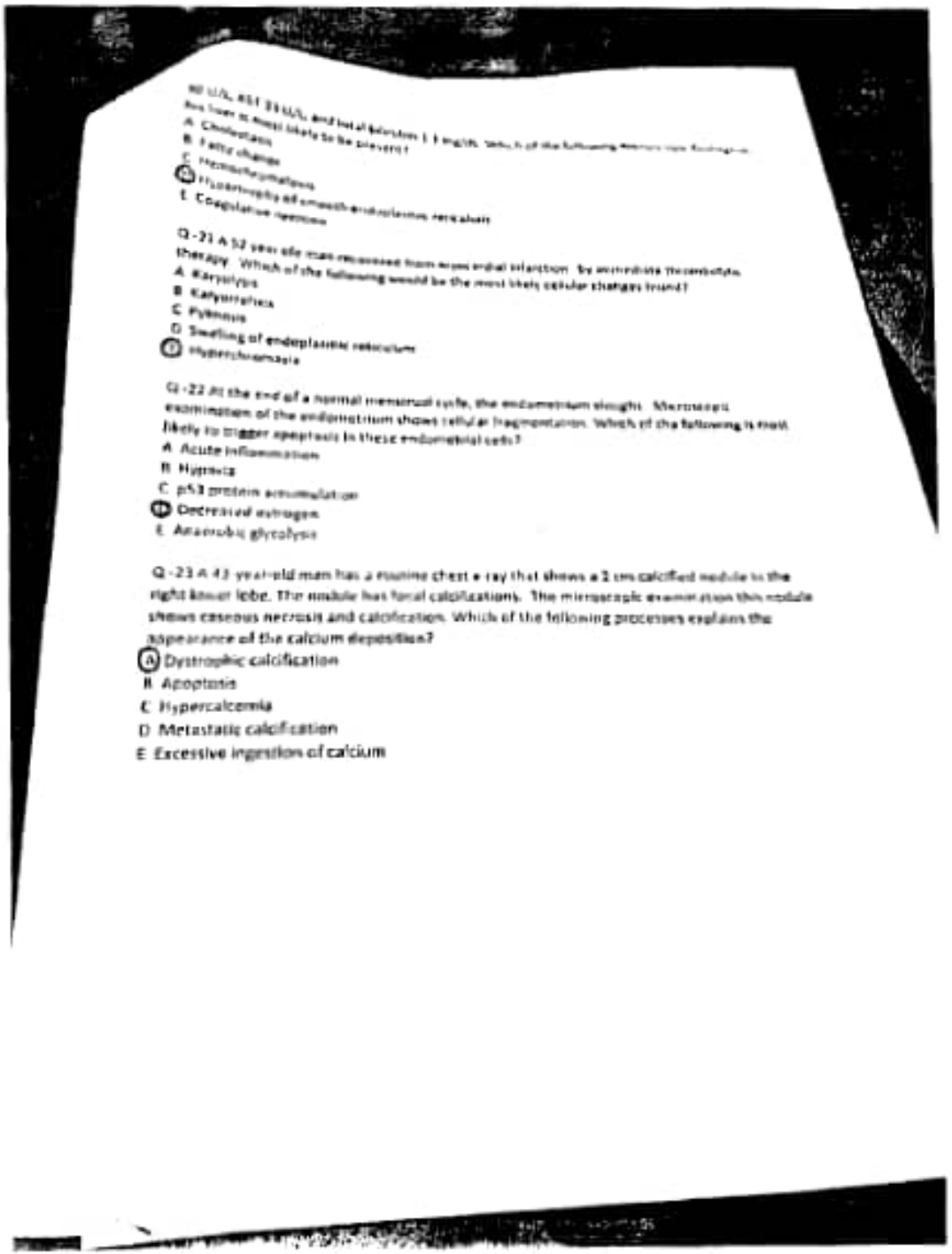

[illegible] U/L, AST 33 U/L, and total bilirubin 1.1 mg/dL. Which of the following [illegible] liver is most likely to be present?

A. Cholestasis
B. Fatty change
C. Hepatocellular [illegible]
D. Hypertrophy of smooth endoplasmic reticulum
E. Coagulative necrosis

Q-21 A 52 year old man recovered from acute [illegible] infarction by intravenous thrombolytic therapy. Which of the following would be the most likely cellular changes found?

A. Karyolysis
B. Karyorrhexis
C. Pyknosis
D. Swelling of endoplasmic reticulum
E. Hyperchromasia

Q-22 At the end of a normal menstrual cycle, the endometrium sloughs. Microscopic examination of the endometrium shows cellular fragmentation. Which of the following is most likely to trigger apoptosis in these endometrial cells?

A. Acute inflammation
B. Hypoxia
C. p53 protein accumulation
D. Decreased estrogen
E. Anaerobic glycolysis

Q-23 A 43 year-old man has a routine chest x ray that shows a 2 cm calcified nodule in the right lower lobe. The nodule has focal calcifications. The microscopic examination this nodule shows caseous necrosis and calcification. Which of the following processes explains the appearance of the calcium deposition?

A. Dystrophic calcification
B. Apoptosis
C. Hypercalcemia
D. Metastatic calcification
E. Excessive ingestion of calcium

Q. 05 Which of the following substances would be hastilely found in myocardial fibers of heart after ischemic heart death.

A Lipofuscin pigments
B Russell bodies
C Neutrophil granules
D Cholesterol crystals
E Anthracotic pigment

Q -06 The biopsy of area of the lower esophageal mucosa a showed the presence of columnar epithelium with goblet cells. Which of the following mucosal alterations is most likely represented by these findings?

A Dysplasia
B Hyperplasia
C Carcinoma
D Ischemia
E Metaplasia

Q – 07 A computed tomographic (CT) scan of 44 years old lady shows a large 3.5 cm cystic area in her left parietal lobe cortex. This CT finding is most likely the consequence of resolution from which of the following cellular events?

A Liquefactive necrosis
B Atrophy
C Coagulative necrosis
D Caseous necrosis
E Apoptosis

Q -08 A 20 -year-old mother starts breast feeding to her new born baby Which of the following cellular processes that began in the breast during pregnancy and lactating period of time?

A Stromal hypertrophy
B Epithelial dysplasia
C Steatocyte atrophy
D Ductal epithelial metaplasia
E Lobular hyperplasia

Q- 09 A 60 year old lady with breast cancer and wide spread bony metastases is found to have calcification of multiple organs. The calcification can be best describe as:-

A Dystrophic with decreased calcium level
B Lipochrome from 'wear and tear'
C Dystrophic calcification with increased calcium level
D Cholesterol from atherosclerosis
E Metastatic calcification with increased calcium level

Department of Pathology
Azra Naheed Medical College
IIe Grand Test-2, 22 January 2019
MBBS 3rd Year (MCQ)
(Cell Injury)

Time Allowed: 25 min

Total Marks: 25

Name: Ehtasham
Roll No: F16-019
Date: _____

Instructions:

1. All objective questions are to be attempted on the paper and returned to the invigilator within specified time after you have received the question paper.
2. Any cuttings or overwriting in answering the objective part will not be accepted and no marks will be given even if the answer is correct.

Q-01 which of the following mechanisms is involved in the chemo therapy of cancer?

A Coagulative necrosis
B Mitochondrial poisoning
C Phagocytosis
D Acute inflammation
(E) Apoptosis

Q-02 In a ischemic injury to a man of 45 years old which of the following cellular changes occurs in myocardial fibers?

A Glycogen stores are depleted
B Cytoplasmic sodium increases
(C) Nuclei undergo karyorrhexis
D Intracellular pH diminishes
E Blebs form on cell membranes

Q-03 Which of the following substances is most likely to be accumulated and produced a yellow-brown colour at the site of injury 16 days later after the injury of iron rod on his arm?

(A) Lipofuscin
B Bilirubin
C Melanin
D Hemosiderin
E Glycogen

Q-04 The biopsy of 0.5 to 1.0 cm in size, hilar lymph node of a coal mine worker showed a jet black in colour throughout with reactive hyperplasia. Which of the following is the most likely cause for this appearance to the hilar nodes?

(A) Anthracotic pigment
B Lipochrome deposits
C Melanin accumulation
D Hemosiderosis
E Metastatic carcinoma

Q-10 A Young woman developed chronic renal failure and hyper tension with blood pressure in the range of 150/90 to 180/110 mm Hg. A chest x-ray shows an enlarged heart. Which of the following processes involving the myocardial fibers?

(A) Hypertrophy
B Fatty infiltration
C Hyperplasia
D Fatty degeneration
E Edema

Q-11 A girl of 29-years is hospitalized with AIDS and is found to have pulmonary tuberculosis on chest X-Ray. Which type of necrosis is found in this lesion.

(A) Caseous
B Coagulative
C Enzymatic
D Fibrinoid
E Liquefactive

Q-12 A study is performed to identify predisposing risks for tissue cellular changes. In some persons epithelial metaplasia occurs. In which of the following situations is the process of epithelial metaplasia most likely to take place?

A Tanning of the skin following sunlight exposure
B Lactation following pregnancy
(C) Vitamin A deficiency
D Acute myocardial infarction
E Urinary obstruction from an enlarged prostate

Q-13 On routine physical examination of a man of 56 years. Physician noticed his blood pressure > 155/98 mmHg. If his blood pressure remain untreated, which of the following adaptive changes will occur in myocardium

A Atrophy
B Hyperplasia
C Metaplasia
(D) Hypertrophy
E-Haemosiderosis

Q-14 A man of 46 –year old with history of weight loss, fatigue and weakness with numbness and tingling sensation in right hand (Carpal tunnel syndrome). Which of the following will be responsible for this lesion?

(A) Steatosis
B Amyloidosis
C Hemosiderosis
D Glycogen
E Calcium Deposit

Q – 24 The [illegible] examination of renal biopsy of a [illegible] suffering with a renal lesion reveals tubular necrosis and [illegible]. Which of the following can be responsible for this lesion?

A. Steatosis
B. Lipid [illegible]
C. Fatty infiltration
D. Cholesterolosis
E. Protein accumulation

Q – 25 A 62 years old man dies 24 hours after substernal chest pain. Which of the following would be most likely cellular changes found?

A. Karyolysis
B. Karyorrhexis
C. Pyknosis
D. Swelling of endoplasmic reticulum
E. Bleb formation

2019

Q- 15 A man of 45 year old uncontrole diabetes mellis suffer with unhealed ulcer on the foot since 3 month. There is change of wound skin color with pus discharged sinus. Which of the following Cellular changes is most likely to accompany these findings?

A Coagulative necrosis

B Gangrenous

C Fat necrosis

D Apoptosis

E Liquefactive necrosis

Q - 16 A 32-year-old man has had a high fever for the past 2 days. He develops left upper quadrant pain. Abdominal CT shows a wedge-shaped 1.5 x 3 cm splenic lesion with base on the capsule. The splenic lesion is most likely to result from which of the following cellular abnormalities?

A Coagulative necrosis

B Abscess formation

C Metaplasia

D Caseous necrosis

E Liquefactive necrosis

Q- 17 Excisional biopsy of dark color spot on the skin of the young girl reveals dark brown intracellular dispersed pigments. Which of the following can be?

A Hemochromatosis

B Melanin Pigments

C Calcium Salt

D Iron Pigment

E Phosphorus Compounds

Q 18 A 73-year-old man has difficulty with urination. On digital rectal examination, his prostate is diffusely enlarged. Which of the following represents a pathologic change leading to this man's problem?

A Dysplasia

B Hypertrophy

C Hyperplasia

D Metaplasia

E Neoplasia

Q-19 Pyogenic bacterial infections and ischaemic brain infartes most chareteristicakly produce which of the following

A Caseous Necrosis

B Coagulative necrosis

C Fate necrosis

D Fibrinoid necrosis

E Liquefactive necrosis

Q- 20 A 45-year-old man has a history of chronic alcohol abuse and is performing work at his job. He has had no major illnesses. Laboratory studies show a serum albumin of 4.1 g/dL, ALT

enomegaly

Q-12 A 24-year-old woman with a history of heavy and painful menstrual periods has been having difficulty conceiving. Further workup includes a bimanual pelvic examination and an ultrasound, which demonstrates a mass in the uterus that is presumed to be a leiomyoma. This mass is a

(A)benign tumor of mesenchymal tissue.
(B)benign tumor of surface epithelium.
(C)malignant tumor of epithelial tissue.
(D)malignant tumor of glandular epithelium.
(E)malignant tumor of mesenchymal tissue.

Q-13 . A 68-year-old man has a long history of prostate cancer that was metastatic at the time of diagnosis. Over the past 2 months, he has had significant weight loss, loss of appetite, and loss of energy. His current spectrum of conditions can be attributed to which of the following?

(A)Platelet-derived growth factor
(B)Fibroblast growth factor
(C)Interleukin-2
(D)Tumor necrosis factor-α
(E)Vascular endothelial growth factor

Q-14 A 58-year-old man with a 700-pack-per-year smoking history presents to the emergency department with shortness of breath and hemoptysis. Portable chest radiography demonstrates a large mass centrally located within the left lung field. The serum calcium is 13.0 mg/dL (normal 8.5 to 10.2). The metabolic abnormality described here is likely due to elaboration of which substance?

(A)Adrenocorticotropic hormone–like substance
(B)Antidiuretic hormone
(C)Carcinoembryonic antigen
(D)Erythropoietin
(E)Parathyroid-related hormone

Q-15 . An 8-year-old boy is referred to the dermatologist for numerous "suspicious" pigmented lesions on the face and neck. Further history reveals that the patient has had difficulty seeing out of his right eye; he is referred to the ophthalmologist, who diagnoses an ocular melanoma. Based on the patient's symptoms, the diagnosis of xeroderma pigmentosum is considered. This condition results from

(A)aberrant expression of a receptor tyrosine kinase.
(B)an inborn defect in DNA repair.
(C)chemical carcinogenesis.
(D)DNA viral infection.
(E)retroviral infection.

e Allowed: 25 min

Cell Injury

Total Marks: 25

2019

Name: [redacted]

Roll No: [redacted]

Date: _____

Instructions:

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2. **Any cuttings or overwriting in answering the objective part will not be accepted and no marks will be given even if the answer is correct.**

1.A 57 -year- lady has a malignant lymphoma. She is treated with a chemotherapeutic agent which results in the loss of individual neoplastic and the lymphoma decreases in size, as documented on abdominal CT scans. By which of the following mechanisms has her neoplasm primarily responded to therapy?

A Coagulative necrosis
B Mitochondrial poisoning
C Phagocytosis
D Acute inflammation
(E) Apoptosis

2.A man of 58 years has experienced severe chest pain and tachycardia. Laboratory studies show a serum troponin I of 10 ng/mL. A coronary angiogram reveals >90% occlusion of the anterior interventricular artery. In this setting, an irreversible injury to myocardial fibers will have occurred when which of the following cellular changes occurs?

A Glycogen stores are depleted
B Cytoplasmic sodium increases
(C) Nuclei undergo karyorrhexis
D Intracellular pH diminishes
E Blebs form on cell membranes

3.A man of 42 -year fell down pallet rack, which strikes him on his left thigh. The bone and skin is not broken. Within 2 days there is a 6 x 8 cm purple colour to the site of injury. Which of the following substances has most likely accumulated at the site of injury to produce a yellow-brown colour at the site of injury 16 days later?

(A) Lipofuscin
Bilirubin
Melanin
Hemosiderin
Glycogen

year old man who works in a factory that produces plastic pipe has experienced weight loss, and vomiting over the past 4 months. An abdominal CT scan shows a 12-cm mass in the right of the liver. A liver biopsy is performed, and microscopic examination shows an angiosarcoma. The patient has most likely been exposed to which of the following agents?

a) Arsenic
b) Asbestos
c) Benzene
d) Beryllium
e) Nickel
f) Vinyl chloride
g) Naphthalene

Q. 5 An epidemiologic study is performed to assess risks for cervical carcinoma. The cells from cervical lesions in a population of women are analyzed. Binding of certain viral proteins to *pRB* is found in patients in whom dysplastic cells are present. Viral proteins from which of the following are most likely to bind *pRB*, increasing the risk for dysplasia?

a) Cytomegalovirus
b) Epstein-Barr virus
c) Herpes simplex virus
d) Hepatitis B virus
e) HIV
f) Human papillomavirus
g) JC papovavirus

Q. 6 During a routine health maintenance examination of a 40 year old man, a stool guaiac test result was positive. A follow-up sigmoidoscopy showed a 1.5-cm, circumscribed, pedunculated mass on a short stalk, located in the upper rectum. Which of the following terms best describes this lesion?

a) Adenoma
b) Hamartoma
c) Sarcoma
d) Choristoma
e) Nevus

Q. 7 A 40 year old man notices an increasing number of lumps in the groin and armpit. On physical examination, he has generalized nontender lymph node enlargement and hepatosplenomegaly. An inguinal lymph node biopsy specimen shows a malignant tumor of lymphoid cells. Immunoperoxidase staining of the tumor cells with antibody to *BCL2* is positive in the lymphocytic cell nuclei. Which of the following mechanisms has most likely produced the lymphoma?

a) Increased tyrosine kinase activity
b) Lack of apoptosis

14.A lady of 22-year has a congenital anemia and required multiple transfusions over many years. She now has no significant findings on physical examination. Which of the following microscopic findings would most likely present in her liver?

A Steatosis in hepatocytes
B Bilirubin in canaliculi
(C) Hemosiderin in hepatocytes
D Glycogen in hepatocytes
E Amyloid in portal triads

15.A woman of 40-year has the sudden onset of severe abdominal pain with marked guarding and muscular rigidity. She has laboratory findings that include serum AST of 43 U/L, ALT of 30 U/L, LDH of 60 U/L, and lipase 415 U/L. An abdominal CT scan reveals peritoneal fluid collections and decreased attenuation along with enlargement of the pancreas. Which of the following cellular changes is most likely to accompany these findings?

A Coagulative necrosis
B Dry gangrene
(C) Fat necrosis
D Apoptosis
E Liquefactive necrosis

16.A 26-year-old man has had a high fever for the past 2 days. Echocardiography shows destruction of the aortic valve by large, irregular vegetations. Staphylococcus aureus is cultured from his blood. He develops left upper quadrant pain. Abdominal CT shows a wedge-shaped 1.5 x 3 cm splenic lesion with base on the capsule. The splenic lesion is most likely to result from which of the following cellular abnormalities?

(A) Coagulative necrosis
B Abscess formation
C Metaplasia
D Caseous necrosis
E Liquefactive necrosis

17.A 35-year-old western cultured lady has developed increasing icterus over the last week with enlarged liver. Laboratory studies show hyperammonemia. Abdominal CT scan shows a liver twice normal size. These changes in her liver most likely resulted from which of the following conditions?

A Galactosemia
B Hemochromatosis
C Tuberculosis
(D) Alcoholism
E Hypoxemia

18.A 73-year-old man has difficulty with urination. On digital rectal examination, his prostate is diffusely enlarged. Which of the following represents a pathologic change leading to this man's problem?

A Dysplasia
B Hypertrophy
(C) Hyperplasia
D Metaplasia
E Neoplasia

a. BCL2
b. Catalase
c. Cytochrome c
d. Lipofuscin
e. Phospholipase

13) In a study of viral hepatitis infection, it is observed that cytotoxic T lymphocytes (CTLs) induce death in virally infected hepatocytes. The CTLs release perforin to allow entry of their granules. Which of the following substances is found in those granules that directly activates programmed cell death?

a. BCL2
b. Endonuclease
c. Granzyme B
d. Nitric oxide
e. p53

14) While in a home improvement center warehouse buying paint, a 35-year-old man hears "Look out below!" and is then struck on the leg by a falling pallet rack, which strikes him on his left leg in the region of his thigh. The skin is not broken. Within 2 days there is a 5 x 7 cm purple color to the site of injury. Which of the following substances has most likely accumulated at the site of injury to produce a yellow-brown color 16 days after the injury?

a. Lipofuscin
b. Bilirubin
c. Melanin
d. Hemosiderin
e. Glycogen

15) A 70-year-old man with hypercalcemia died suddenly. At autopsy, microscopic examination showed noncrystalline amorphous deposits of calcium salts in gastric mucosa, renal interstitium, and alveolar walls of lungs. Which of the following underlying conditions would most likely explain these findings?

a. Chronic active hepatitis
b. Diffuse parathyroid hyperplasia
c. Disseminated tuberculosis
d. Generalized atherosclerosis
e. Normal aging process

9] A 34-year-old obese woman has experienced heartburn from gastric reflux for the past 5 years after eating large meals. She undergoes upper gastrointestinal endoscopy, and a biopsy specimen of the distal esophagus is obtained. Which of the following microscopic changeshas most likely occurred?

a. Columnar metaplasia
b. Goblet cell hyperplasia
c. Lamina propria atrophy
d. Mucosal hypertrophy
e. Squamous dysplasia

10] In an experiment, a large amount of a drug is administered to experimental organisms and is converted by cytochrome P-450 to a toxic metabolite. Accumulation of this metabolite leads to increased intracellular lipid peroxidation. Depletion of which of the following intracellular substances within the cytosol exacerbates this form of cellular injury by this mechanism?

a. ATP
b. Glutathione
c. mRNA
d. NADPH oxidase
e. Nitric oxide synthase.

11] A 65-year-old man experienced severe substernal chest pain for 3 hours. An ECG showed changes consistent with an acute myocardial infarction. After thrombolytic therapy with tissue plasminogen activator (t-PA), his serum creatine kinase level increased. Which of following tissue events most likely occurred in the myocardium after t-PA therapy?

a. Cellular regeneration
b. Drug toxicity
c. Increased synthesis of CK
d. Myofiber atrophy
e. Reperfusion injury

12] A 47-year-old man has a lung carcinoma with metastases. After one month of chemotherapy cycle, histologic examination of a metastatic lesion shows many foci in which individual tumor cells appear shrunken and deeply eosinophilic. Their nuclei exhibit condensed aggregates of chromatin under the nuclear membrane. The pathologic process affecting these shrunken tumor cells is most likely triggered by release of which of the following substances into the cytosol?

Q - 24 The microscopic examination of renal biopsy of a man suffering with a renal failure reveals tubular necrosis and thyroiditis. Which of the following can be response for this lesion?

(A) Steatosis
B Lipid degeneration
C Fatty infiltration
D Cholesterolosis
E Protein accumulation

Q -25 A 62 years old man dies 24 hours after substernal chest pain. Which of the following would be most likely cellular changes found?

(A) Karyolysis
B. Karyorrhexis
C. Pyknosis
D. Swelling of endoplasmic reticulum
E. Bleb formation

30 U/L, AST 35 U/L, and total bilirubin 1.1 mg/dL. Which of the following microscopic findings in his liver is most likely to be present?

A Cholestasis
B Fatty change
C Hemochromatosis
D Hypertrophy of smooth endoplasmic reticulum
E Coagulative necrosis

Q-21 A 52 year old man recovered from myocardial infarction by immediate thrombolytic therapy. Which of the following would be the most likely cellular changes found?

A Karyolysis
B Karyorrhexis
C Pyknosis
D Swelling of endoplasmic reticulum
E Hyperchromasia

Q-22 At the end of a normal menstrual cycle, the endometrium sloughs. Microscopic examination of the endometrium shows cellular fragmentation. Which of the following is most likely to trigger apoptosis in these endometrial cells?

A Acute inflammation
B Hypoxia
C p53 protein accumulation
D Decreased estrogen
E Anaerobic glycolysis

Q-23 A 43-year-old man has a routine chest x-ray that shows a 2 cm calcified nodule in the right lower lobe. The nodule has focal calcifications. The microscopic examination this nodule shows caseous necrosis and calcification. Which of the following processes explains the appearance of the calcium deposition?

A Dystrophic calcification
B Apoptosis
C Hypercalcemia
D Metastatic calcification
E Excessive ingestion of calcium

24.A morbidly obese 51-year-old lady dies from complications of heart disease. At autopsy, her heart was enlarged. Microscopically, there is increased fibrous connective tissue adipocytes interdigitating with the myocardial fibers. Which of the following terms best describes the presence of the adipocytes in her myocardium?

(A) Steatosis
B Lipid degeneration
C Fatty infiltration
D Cholesterolosis
E Xanthomatosis

25.A 62 years old man recovered from the myocardial infarction by immediate thrombolytic therapy. If it had been possible to examine microscopically the sections of his heart, which of the following would be most likely cellular changes found?

A. Karyolysis
B. Karyorehexis
C. Pyknosis
D. Swelling of endoplasmic reticulum
(E) Bleb formation

...e amplifications

...Reduced DNA repair

e) Loss of cell cycle inhibition

Q. 8 A 60 year old man has had several episodes of hematuria in the past week. On physical examination, there are no abnormal findings. A urinalysis shows 4+ hematuria, and cytologic examination of the urine shows that atypical cells are present. The urologist performs a cystoscopy and observes a 4-cm sessile mass with a nodular, ulcerated surface in the dome of the bladder. Which of the following terms best describes this lesion?

a) Papilloma
b) Carcinoma
c) Adenoma
d) Sarcoma
e) Fibroma

Q. 9 A 66 year old man with chronic cough has an episode of hemoptysis. On physical examination, there are no abnormal findings. A chest radiograph shows a 6-cm mass in the right lung. A sputum cytologic analysis shows cells consistent with squamous cell carcinoma. Metastases from this neoplasm are most likely to be found at which of the following sites?

a) Chest wall muscle
b) Splenic red pulp
c) Hilar lymph nodes
d) Veretebral bone marrow
e) Cerebrum

Q. 10 A 42 year old man is concerned about a darkly pigmented "mole" on the back of his hand. The lesion has enlarged and bled during the past month. On physical examination, there is a slightly raised, darkly pigmented, 1.2-cm lesion on the dorsum of the right hand. The lesion is completely excised. Microscopically, a malignant melanoma is present. Which of the following factors presents *the greatest risk for the development of this neoplasm?*

a) Smoking tobacco
b) Ultraviolet radiation
c) Chemotherapy
d) Asbestos exposure
e) Allergy to latex

Q. 11 *A clinical study involves patients diagnosed with carcinoma whose tumor stage is T4N1M1. The patients' survival rate 5 years from the time of diagnosis is less than 50% regardless of therapy. Which of the following clinical findings is most likely to be characteristic of this group of patients?*

a) Cachexia
b) Cardiac murmur
c) Icterus
d) Loss of sensation

5.A boy of 12 years has had multiple episodes of ear pain accompanied by fever. On examination his right tympanic membrane is red and bulging with yellow exudate and culture positive for Haemophilus influenzae. A year later his head CT scan shows a mass in the right middle ear. Which of the following materials is most likely to be seen in the tissue curetted from his middle ear?

A Lipofuscin pigment
B Russell bodies
C Neutrophil granules
D Cholesterol crystals
E Anthracotic pigment

6.A man 45 years has complained of mild burning substernal pain following meals for the past 3 years. Upper GI endoscopy reveals erythematous area of the lower esophageal mucosa and the biopsies show the presence of columnar epithelium with goblet cells. Which of the following mucosal alterations is most likely represented by these findings?

A Dysplasia
B Hyperplasia
C Carcinoma
D Ischemia
E Metaplasia

7.A woman 0f 69 years had the loss of consciousness. A cerebral angiogram revealed an occlusion to her left middle cerebral artery. Months later, a computed tomographic (CT) scan shows a large 5 cm cystic area in her left parietal lobe cortex. This CT finding is most likely the consequence of resolution from which of the following cellular events?

A Liquefactive necrosis
B Atrophy
C Coagulative necrosis
D Caseous necrosis
E Apoptosis

8.A 19-year-old lady gives birth to her first child. She begins breast feeding the infant. She continues breast feeding for almost a year with no difficulties and no complications. Which of the following cellul processes that began in the breast during pregnancy allowed her to nurse the infant for this period of time?

A Stromal hypertrophy
B Epithelial dysplasia
Steatocyte atrophy
Ductal epithelial metaplasia
Abular hyperplasia

Scanned by CamScanner

Q. 4 During a routine health maintenance examination of a 40 year old man, a stool guaiac test was positive. A follow-up sigmoidoscopy showed a 1.5-cm, circumscribed, pedunculated mass on a short stalk, located in the upper rectum. Which of the following terms best describes this lesion?

a) Adenoma
b) Hamartoma
c) Sarcoma
d) Choristoma
e) Nevus

Q. 5 A 40 year old man notices an increasing number of lumps in the groin and armpit. On physical examination, he has generalized nontender lymph node enlargement and hepatosplenomegaly. An inguinal lymph node biopsy specimen shows a malignant tumor of lymphoid cells. Immunoperoxidase staining of the tumor cells with antibody to BCL2 is positive in the lymphocytic cell nuclei. Which of the following mechanisms has most likely produced the lymphoma?

a) Increased tyrosine kinase activity
b) Lack of apoptosis
c) Gene amplifications
d) Reduced DNA repair
e) Loss of cell cycle inhibition

Q. 6 A 60 year old man has had several episodes of hematuria in the past week. On physical examination, there are no abnormal findings. A urinalysis shows 4+ hematuria, and cytologic examination of the urine shows that atypical cells are present. The urologist performs a cystoscopy and observes a 4-cm sessile mass with a nodular, ulcerated surface in the dome of the bladder. Which of the following terms best describes this lesion?

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a) Chest wall muscle
b) Splenic red pulp
c) Hilar lymph nodes
d) Vertebral bone marrow
e) Cerebrum

Patho cell Injury 2019 (MCQs)

19.In an experiment, a tissue preparation is subjected to oxidant stress. There are increased numbers of free radicals generated within the cells. Generation of which of the following enzymes within these cells is the most likely protective mechanism to reduce the number of free radicals?

(A) Glutathione peroxidase
B Catalase
C Hydrogen peroxide
D NADPH oxidase
E Myeloperoxidase

20.A 45-year-old man has a history of chronic alcohol [illegible] had no major illnesses. Laboratory studies show a serum [illegible] and total bilirubin 1.1 mg/dL. Which of the following microscopic findings is most likely present?

A Cholestasis
B Fatty change
C Hemochromatosis
(D) Hypertrophy of smooth endoplasmic reticulum
E Coagulative necrosis

21.An ultrasound of 30-year-old woman reveals a 2 cm left breast mass when she went under examination after sexual harassment. There is no lymphadenopathy. No skin lesions are seen. A needle biopsy of the breast mass is performed. On microscopic examination, the biopsy shows fat necrosis. This biopsy result is most consistent with which of the following etiologies?

A Physiologic atrophy
(B) Breast trauma
C Lactation
D Radiation injury
E Hypoxic injury

22.At the end of a normal menstrual cycle, the endometrium sloughs. Examination of the endometrium microscopically shows cellular fragmentation. Which of the following is most likely to trigger apoptosis in these endometrial cells?

A Acute inflammation
B Hypoxia
C p53 protein accumulation
(D) Decreased estrogen
E Anaerobic glycolysis

23.A 43-year-old man has a routine chest x-ray that shows a 2 cm nodule in the right lower lobe. The nodule has focal calcifications. A wedge resection of the nodule is done. On microscopic examination the nodule shows caseous necrosis and calcification. Which of the following processes explains the appearance of the calcium deposition:

(A) Dystrophic calcification
B Apoptosis
C Hypercalcemia
D Metastatic calcification
E Excessive ingestion of calcium

Scanned by CamScanner

B Russell bodies
C Neutrophil granules
D Cholesterol crystals
E Anthracotic pigments

Q -06 The biopsy of area of the lower esophageal mucosa showed the presence of columnar epithelium with goblet cells. Which of the following mucosal alterations is most likely represented by these findings?
A Dysplasia
B Hyperplasia
C Carcinoma
D Ischemia
E Metaplasia

Q – 07 A computed tomographic (CT) scan of 44 years old lady shows a large 5.5 cm cystic area in her left parietal lobe cortex. This CT finding is most likely the consequence of resolution from which of the following cellular events?
A Liquefactive necrosis
B Atrophy
C Coagulative necrosis
D Caseous necrosis
E Apoptosis

Q -08 A 20 -year-old mother starts breast feeding to her new born baby. Which of the following cellular processes that began in the breast during pregnancy and lactating period of time?
A Stromal hypertrophy
B Epithelial dysplasia
C Steatocyte atrophy
D Ductal epithelial metaplasia
E Lobular hyperplasia

Q- 09 A 60 year old lady with breast cancer and wide spread bony metastases is found to have calcification of multiple organs. The calcification can be best describe as:-
A Dystrophic with decreased calcium level
B Lipochrome from 'wear and tear'
C Dystrophic calcification with increased calcium level
D Cholesterol from atherosclerosis
E Metastatic calcification with increased calcium level

13

TEST NEOPLASIA , ANCOLOGY

Time 15 min

Neoplasia 2017

Q. 1 A [illegible] year old woman sees her physician because she feels lumps in the right axilla. The [illegible] notes right axillary lymphadenopathy on physical examination. The nodes are painless but [illegible] of the following is the most likely diagnosis?

a) Ductal carcinoma of the breast
b) Acute mastitis with breast abscess
c) Leiomyosarcoma of the uterus
d) Cerebral glioblastoma multiforme
e) Squamous dysplasia of the larynx

Q. 2 A 32 year old woman has experienced dull pelvic pain for the past 2 months. Physical [illegible] shows a right adnexal mass. An abdominal ultrasound scan shows a 7.5-cm cystic ovarian [illegible] mass is surgically excised. The surface of the mass is smooth, and it is nonadherent to sur[illegible] structures. On gross examination, the mass is cystic and filled with hair. Microscopically, [illegible] epithelium, tall columnar glandular epithelum, cartilage, and fibrous connective tissue ar[illegible] Which of the following is the most likely diagnosis?

a) Adenocarcinoma
b) Fibroadenoma
c) Glioma
d) Hamartoma
e) Mesothelioma
f) Rhabdomyosarcoma
g) Teratoma

Smart solution

Q. 3 An epidemiologic study investigates the potential cellular molecular alterations th[illegible] to the development of cancers in a population. Data analyzed from resected colonic le[illegible] changes are occurring that show the evolution of a sporadic colonic adenoma into an i[illegible] carcinoma. Which of the following best describes the mechanism producing these cha[illegible]

a) Activation of proto-oncogenes by chromosomal translocation
b) Stepwise accumulation of multiple proto-oncogene and tumor suppressor ge[illegible]
c) Extensive regeneration of tissues increasing the mutation rate in regenerati[illegible]
d) Inheritance of defects in DNA repair genes that increase the susceptibility [illegible]
e) Overexpression of growth factor receptor genes

B Lipochrome from wear and tear
C Glycogen from a storage disease
D Cholesterol from atherosclerosis
E Calcium deposition following necrosis

10.A woman of 21 years had Goodpasture syndrome which progressed to chronic renal failure and she has blood pressure in the range of 150/90 to 180/110 mm Hg. She developed chronic renal failure and requires renal dialysis. A chest x-ray shows an enlarged heart. The size of her heart is most likely to be the result of which of the following processes involving the myocardial fibers?

(A) Hypertrophy
B Fatty infiltration
C Hyperplasia
D Fatty degeneration
E Edema

11.A girl of 19-years went to a park for whole day sun both. The next day she has a darker complexion and skin does not show warmth, erythema, or tenderness. Her skin tone fades to its original appearance within a month. Which of the following substances contributes the most to the biochemical process leading to these skin changes?

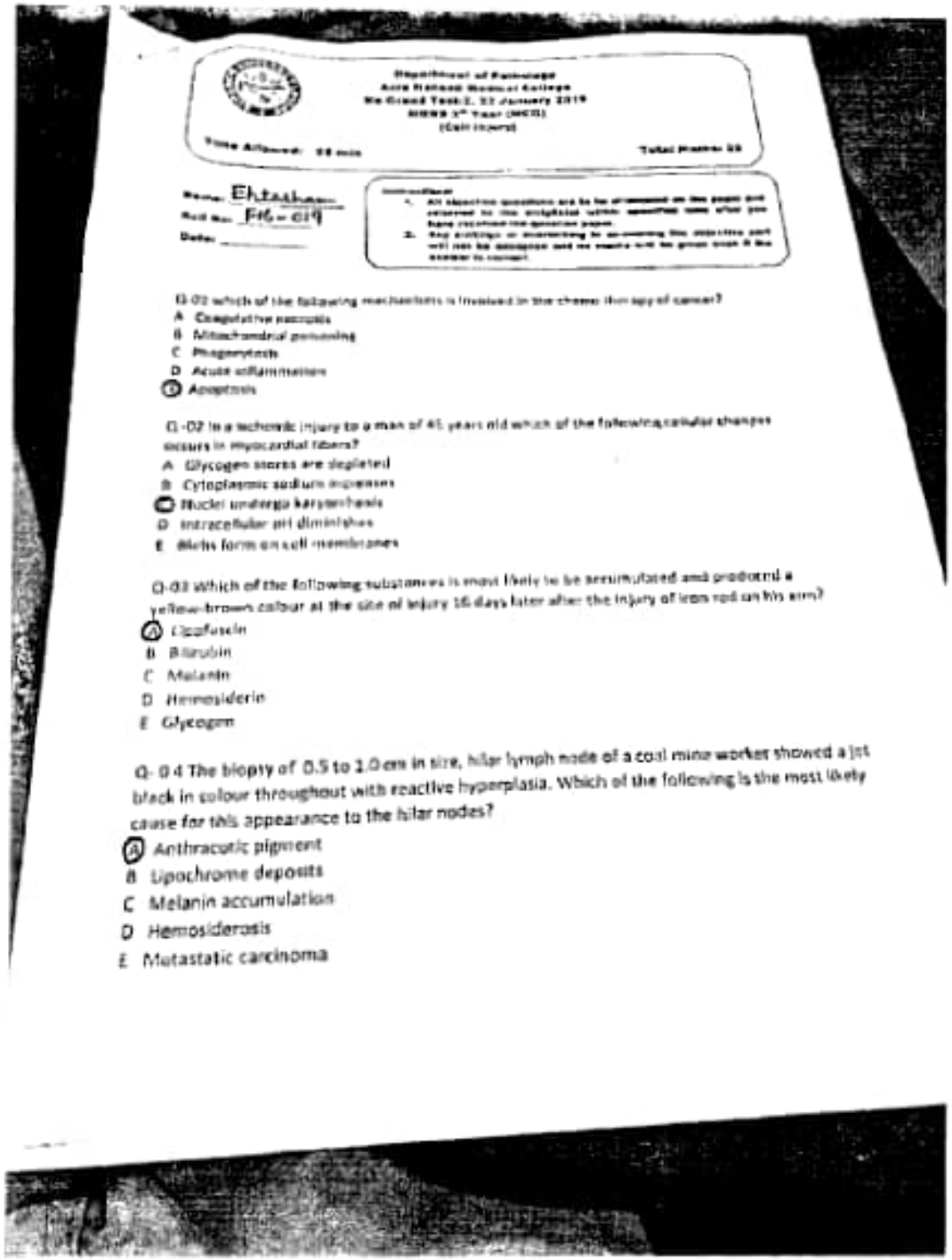
A Iron oxide
B Lipofuscin
(C) Tyrosine
D Homogentisic acid
E Glycogen

12.A study is performed to identify predisposing risks for tissue cellular changes. In some persons epithelial metaplasia occurs. In which of the following situations is the process of epithelial metaplasia most likely to take place?

A Tanning of the skin following sunlight exposure
B Lactation following pregnancy
(C) Vitamin A deficiency
D Acute myocardial infarction
E Urinary obstruction from an enlarged prostate

13.A study is performed involving the microscopic analysis of tissues obtained from surgical procedure Some of these tissues have the microscopic appearance of an increased cell size of multiple cells withi the tissue, due to an increase in the amount of cell cytoplasm, with nuclei remaining uniform in size. Which of the following conditions is most likely to have resulted in this finding?

(A) Uterine myometrium in pregnancy
B Female breast at puberty
Liver following partial resection
Ovary following menopause
Cervix with chronic inflammation



Name: Ehtesham
Roll No: F16-019
Date:

Q-01 which of the following mechanisms is involved in the chemotherapy of cancer?
A Coagulative necrosis
B Mitochrondrial poisoning
C Phagocytosis
D Acute inflammation
(E) Apoptosis

Q-02 In a ischemic injury to a man of 45 years old which of the following cellular changes occurs in myocardial fibers?
A Glycogen stores are depleted
B Cytoplasmic sodium increases
(C) Nuclei undergo karyorrhexis
D Intracellular pH diminishes
E Blebs form on cell membranes

Q-03 Which of the following substances is most likely to be accumulated and produced a yellow-brown colour at the site of injury 15 days later after the injury of iron rod on his arm?
(A) Lipofuscin
B Bilirubin
C Melanin
D Hemosiderin
E Glycogen

Q- 04 The biopsy of 0.5 to 1.0 cm in size, hilar lymph node of a coal mine worker showed a jet black in colour throughout with reactive hyperplasia. Which of the following is the most likely cause for this appearance to the hilar nodes?
(A) Anthracotic pigment
B Lipochrome deposits
C Melanin accumulation
D Hemosiderosis
E Metastatic carcinoma

Q-13 Fungal cells that reproduce by budding are seen in the infected tissues of patients with

a. Candidiasis, cryptococcosis, and sporotrichosis

b. Mycetoma, candidiasis and mucormycosis

c. Tinea corporis, tinea unguium, and tinea versicolor

d. Sporotrichosis, mycetoma and aspergillosis

e-candida , tinea, asergelious

14. Which of the following is not the characteristics of histoplasmosis

Person to person transmission

Specific geographic distribution

. Yeasts in tissue

. mycelial phase in the soil

e-all of the above

Q-15 Infection with dermatophyte is most often associated with

a. intravenous drug abuse

b. inhalation of the organism from contaminated bird feces

c. adherence of the organism to perspiration, moist skin

d. Fecal-oral transmission

e-none of the above

C Hyperplasia
D Fatty degeneration
E Edema

Q-11 A girl of 29-years is hospitalized with AIDS and is found to have pulmonary tuberculosis on chest X-Ray. Which type of necrosis is found in this lesion.
A Caseous
B Coagulative
C Enzymatic
D Fibrinoid
E Liquefactive

Q-12 A study is performed to identify predisposing risks for tissue cellular changes. In some persons epithelial metaplasia occurs. In which of the following situations is the process of epithelial metaplasia most likely to take place?
A Tanning of the skin following sunlight exposure
B Lactation following pregnancy
C Vitamin A deficiency
D Acute myocardial infarction
E Urinary obstruction from an enlarged prostate

Q-13 On routine physical examination of a man of 56 years. Physician noticed his blood pressure > 155/98 mmHg. If his blood pressure remain untreated, which of the following adaptive changes will occur in myocardium
A Atrophy
B Hyperplasia
C Metaplasia
D Hypertrophy
E-Haemosiderosis

Q -14 A man of 46 –year old with history of weight loss, fatigue and weakness with numbness and tingling sensation in right hand (Carpal tunnel syndrome). Which of the following will be responsible for this lesion?
A Steatosis
B Amyloidosis
C Hemosiderosis
D Glycogen
E Calcium Deposit

Q. 9 A 42 year old man is concerned about a darkly pigmented "mole" on the back of his hand. The lesion has enlarged and bled during the past month. On physical examination, there is a slightly raised, darkly pigmented, 1.2-cm lesion on the dorsum of the right hand. The lesion is completely excised. Histologically, a malignant melanoma is present. Which of the following factors presents the greatest risk for the development of this neoplasm?

a) Smoking tobacco
b) Ultraviolet radiation
c) Chemotherapy
d) Asbestos exposure
e) Allergy to latex

Q. 5 A 24 year old woman with history of heavy and painful menstrual periods has been having difficulty conceiving despite months of trying to become pregnant. Further work up includes a bimanual pelvic examination and an ultrasound, which demonstrates a mass in the uterus that is presumed to be a leiomyoma. This mass may be:

a) Benign tumour of mesenchymal tissue
b) Benign tumour of surface epithelium
c) Malignant tumour of epithelial tissue
d) Malignant tumour of glandular epithelium
e) Malignant tumour of mesenchymal tissue

Q. 10 Which of the following is likely to indicate that the neoplasm is malignant?

a) Pleomorphism
b) Necrosis
c) Invasion
d) Increased nuclear to cytoplasmic ratio
e) Atypia

Q. 11 Aspergillosis is recognized in tissue by the presence of

a) Metachromatic granules
b) Psuedohyphae
c) Septate hyphae
d) Budding cells
e) Non Budding cells

Q. 12Each of the following statements concerning Cryptococcus neoformans are correct EXCEPT

a. Its natural habitat is the soil, especially associated with pigeon feces
b. Budding yeasts are found in the lesions
c. The initial site of infection is usually the lung
d. Pathogenesis is related primarily to the production of exotoxin A.
e. none of the above

5) A patient is suffering from stroke and has left sided weakness and paralysis in the upper extremity. The type of necrosis associated with well-developed infarct of the brain is:

a. Caseous necrosis
b. Coagulative necrosis
c. Fibrinoid necrosis
d. Gangrenous necrosis
e. Liquefactive necrosis

6) Neutrophils have short half-lives in tissues and die within a few hours after leaving the blood. Which of the following mechanisms is responsible for their death?

a. Autophagy
b. Apoptosis
c. Autolysis
d. Necrosis
e. Ischemia

7) A 16 years old motor cyclist boy sustained blunt trauma to his abdomen. At laparotomy, a small portion of injured left lobe of liver wes removed. Two months later, a CT scan of the abdomen showed that the liver had nearly regained its normal size. Which of the following processes best explains this CT scan finding?

a. Apoptosis
b. Dysplasia
c. Hyperplasia
d. Hypertrophy
e. Metaplasia

8) A 20 year old woman breastfeeds her infant. On examination, her breasts are slightly increased in size. Which of the following processes that occurred in her breasts during pregnancy enables her to breastfeed the infant?

a. Ductal metaplasia
b. Epithelial dysplasia
c. Intracellular lipid deposition
d. Lobular hyperplasia
e. Stromal hypertrophy

Q -15 A man of 45-year old uncontrole diabetes melitis suffer with unhealed ulcer on the foot since 3 month. There is change of wound skin color with pus discharged sinus. Which of the following cellular changes is most likely to accompany these findings?

A Coagulative necrosis
B Gangrenous
C Fat necrosis
D Apoptosis
E Liquefactive necrosis

Q -16 A 32-year-old man has had a high fever for the past 2 days. He develops left upper quadrant pain. Abdominal CT shows a wedge-shaped 1.5 × 3 cm splenic lesion with base on the capsule. The splenic lesion is most likely to result from which of the following cellular abnormalities?

A Coagulative necrosis
B Abscess formation
C Metaplasia
D Caseous necrosis
E Liquefactive necrosis

Q- 17 Excisional biopsy of dark color spot on the skin of the young girl reveals dark brown intracellular dispersed pigments. Which of the following can be?

A Hemochromatosis
B Melanin Pigments
C Calcium Salt
D Iron Pigment
E Phosphorus Compounds

Q 18 A 73-year-old man has difficulty with urination. On digital rectal examination, his prostate it diffusely enlarged. Which of the following represents a pathologic change leading to this man's problem?

A Dysplasia
B Hypertrophy
C Hyperplasia
D Metaplasia
E Neoplasia

Q-19 Pyogenic bacterial infections and ischaemic brain infartes most chareteristicakily produce which of the following

A Caseous Necrosis
B Coagulative necrosis
C Fate necrosis
D Fibrinoid necrosis
E Liquefactive necrosis

Q- 20 A 45-year-old man has a history of chronic alcohol abuse and is performing work at his job. He has had no major illnesses. Laboratory studies show a serum albumin of 4.1 g/dL, ALT

12

CELL INJURY AND ADAPTATIONS

1) You are asked to review an electron micrograph of a section of liver from a chronic alcoholic. Which of the following is an indicator of irreversible injury?

a. Cellular edema
b. Chromatin clumping
c. Mitochondrial swelling
d. Myelin figures
e. Rupture of plasma membrane ✓

2) You are asked to participate in a research project on myocardial infarctions in a rat model. Which of the following occurs in ischemic cell injury?

a. Efflux of K + and Na +
b. Influx of K + and Na +
c. Influx of K+ and H2O
d. Influx of Na+ and Ca++
e. Influx of Na+ and K+

3) A 10 year old boy with known history of sickle cell disease presents to the emergency department complaining of left hypochondrial pain suggestive of a splenic infarct. Microscopic examination of the spleen would most likely reveal which of the following?

a. Caseous necrosis
b. Coagulative necrosis
c. Fibrinoid necrosis
d. Gangrenous necrosis
e. Liquefactive necrosis

4) A 3rd year medical student is asked to write a microscopic description of a coagulative necrosis that was found in the heart of a patient who died of a heart attack. Which of the following best describes coagulative necrosis?

a. Central amorphous acellular eosinophilic material.
b. Eosinophilic cytoplasm with cell outlines preserved.
c. Granular, friable mass of material devoid of cell outlines.
d. Localized, solid, basophilic lesion with calcification
e. Necrosis in which tissue is converted into a fluid

2019

Department of Pathology
Azra Naheed Medical College
Neoplasia test
MBBS 3rd Year (MCQ)

Time Allowed: 15 min **Total Marks: 15**

Q. 1 A 44 year old woman sees her physician because she feels lumps in the right axilla. The physician notes right axillary lymphadenopathy on physical examination. The nodes are painless but firm. Which of the following is the most likely diagnosis?

a) Ductal carcinoma of the breast
b) Acute mastitis with breast abscess
c) Leiomyosarcoma of the uterus
d) Cerebral glioblastoma multiforme
e) Squamous dysplasia of the larynx

Q. 2 A 32 year old woman has experienced dull pelvic pain for the past 2 months. Physical examination shows a right adnexal mass. An abdominal ultrasound scan shows a 7.5-cm cystic ovarian mass. The mass is surgically excised. The surface of the mass is smooth, and it is nonadherent to surrounding pelvic structures. On gross examination, the mass is cystic and filled with hair. Microscopically, squamous epithelium, tall columnar glandular epithelium, cartilage, and fibrous connective tissue are present. Which of the following is the most likely diagnosis?

a) Adenocarcinoma
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c) Glioma
d) Hamartoma
e) Mesothelioma
f) Rhabdomyosarcoma
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Q. 3 An epidemiologic study investigates the potential cellular molecular alterations that may contribute to the development of cancers in a population. Data analyzed from resected colonic lesions show that changes are occurring that show the evolution of a sporadic colonic adenoma into an invasive carcinoma. Which of the following best describes the mechanism producing these changes?

a) Activation of proto-oncogenes by chromosomal translocation
b) Stepwise accumulation of multiple proto-oncogene and tumor suppressor gene mutations
c) Extensive regeneration of tissues increasing the mutation rate in regenerating cells
d) Inheritance of defects in DNA repair genes that increase the susceptibility to develop cancer
e) Overexpression of growth factor receptor genes