

Pharmacology examination for third year students

Time allowed three hours

١٢ august ٢٠١٨

Answer the following items

(١) Factors affecting drug absorption (١٢)marks

(٢) Classification , mechanism of action , **three** therapeutic uses and **three** adverse effects of **benzodiazepine**. (١٢) marks

(٣) **Antitubeculous drugs** : enumerate the different drugs. Mention the mechanism of action of only **two** different drugs and their main side effects. (١٢) marks

(٤) Mechanism of action and **five** pharmacological actions of the following drugs:

(A) **physostigmine** (B) **sodium salicylate** (١٤) marks

(٥) **Fluroquinolones** : mechanism of action , **four** adverse effects and main therapeutic uses (١٢) marks

(٦) **Nitrates** : mechanism of action , **three** therapeutic uses and **four** side effects (١٢) marks

(٧) In a **table** mention examples , mechanism of action , **two** therapeutic uses and **two** side effects of the followings :

(A) **high ceiling diuretics**

(B) **proton pump inhibitors**

(C) **anti-inflammatory agents used in bronchial asthma**

(١٤)marks

(٨) **Insulin** : different preparation according to duration of action , therapeutic uses and main side effects (١٢) marks

Good luck



Aswan University

date: 4 \6\2018

Faculty of medicine

Time allowed: Two hour

Microbiology and immunology department

(Total marks 100)

Microbiology examination- 3rd year

I- Give short account on the following (50 marks)

1. Pathogenesis of anthrax (10 marks)
2. Mechanism of tissue damage in type III hypersensitivity (10 marks)
3. Post-exposure prophylaxis of rabies (10 marks)
4. Stages of viral replication (10 marks)
5. Clinical classification of fungal infection (10 marks)

II- Mention the causative organism(s) and mode (s) of infection of the following diseases (10 marks)

1. Trachoma
2. Malta fever
3. Brill-Zinsser disease
4. Infectious mononucleosis
5. poliomyelitis

III- Compare between the following (10 marks)

- a) Antigenic shift and antigenic drift of influenza virus
- b) Treponemal and non-treponemal tests of syphilis

IV- Give reason (10 marks)

1. Importance of anti HBc-IgM Ab as a hepatitis B marker during window phase
2. Pseudomonas is considered non- Enterobacteriaceae
3. A positive acid-fast bacilli sputum is important in diagnosis of pulmonary tuberculosis
4. Diphtheria toxin is produced only by those strains that are lysogenized by bacteriophage
5. Patients with Di George syndrome suffer from carpopedal spasm



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Microbiology and immunology department

(Total marks 100)

Microbiology examination- 3rd year

V- Chose the correct answer (5 marks)

1- Rapid test used in diagnosis of Clostridia gas gangrene

- a) Elik's test
- b) Nagler's reaction
- c) Sugar fermentation
- d) Culture on blood agar

2- Diagnosis of congenital rubella syndrome during pregnancy is done by detection of

- a) IgM in maternal blood
- b) IgE in maternal blood
- c) IgA in maternal blood
- d) Rubella virus in amniotic fluid

3- Which of the following diseases have not been associated with streptococcal infection

- a) Rheumatic fever
- b) Follicular tonsillitis
- c) Toxic shock syndrome
- d) Food poisoning

4- A viral core is

- a) Responsible for antigenicity
- b) Responsible for viral infectivity
- c) Formed of both DNA and RNA
- d) Participate in viral attachment to host cell

5- Hyperacute graft rejection is caused by

- a) Preformed Ab
- b) CD4 lymphocytes
- c) CD8 lymphocytes
- d) Circulating immune complexes



Aswan University

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Microbiology and immunology department

(Total marks 100)

Microbiology examination- 3rd year

VI- Put true or false for the following statements (5 marks)

- 1- Sabouraud 's dextrose agar is used as a selective medium for cultivation of fungi
- 2- Zoster result from reactivation of latent varicella infection
- 3- Some tumors escape the immune response due to lack of MHC I molecules
- 4- Colostrum is considered as acquired passive immunity
- 5- diphtheria antitoxin is the treatment of choice used in management of a case of diphtheria

VII- A 52 years old man presented with indigestion and heartburn occurring shortly after meals suggestive of duodenal ulcer. Physical examination reveals mild epigastric tenderness, Gram stained film of gastric biopsy showed Gram negative curved rods (10 marks)

1. What is the causative organism?
 2. What is the virulence factor that permits this organism to survive in gastric acidic environment?
 3. What are the culture characters needed for growth of this organism?
 4. Mention one non-invasive test used in diagnosis of this organism
 5. What is the treatment regimen required for elimination of this infection?
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GOOD LUCK



ASWAN UNIVERSITY
FACULTY OF MEDICINE
Pathology Department

Final examination in Pathology
For third year medical students (150 marks)

Date: 24/5/2018

Time: (3 hours) Pages: 4

ALL QUESTIONS TO BE ANSWERED

1- Define the following terms: (1.5 mark each)

- | | |
|----------------------|---------------------|
| -Mesothelioma | -Goiter |
| -Interface hepatitis | -Brodie abscess |
| -Endometriosis | -Nephrotic syndrome |

2- Describe gross and microscopic picture of: (8 marks each)

- A. Chronic pyelonephritis
- B. Cirrhosis
- C. Pleomorphic adenoma

3- Mention: (8 marks each)

- A. Histologic types of bronchogenic carcinoma
- B. Predisposing factors of peptic ulcer
- C. Causes of generalized lymphadenopathy

4- Compare in a table form between:

- A. Congenital and acquired diverticulosis (6 marks)
- B. Osteosarcoma and chondrosarcoma (8 marks)
- C. Hamartoma and teratoma (6 marks)

5- Enumerate: (8 marks each)

- A. Types of acute inflammation and the morphology of two of them.
- B. Non-neoplastic ovarian cysts
- C. Complications of hypertension



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- D. Causes of sudden death in case of myocardial infarction
- E. Cystic masses of spleen

6- True or false with correction of false (1.5 mark each)

- 1) Osler's nodule is one of complications of non-infective endocarditis
- 2) Caput medusa is one of features of portal hypertension
- 3) Addison's disease is also called primary chronic adrenal insufficiency
- 4) De Quervain thyroiditis is caused by lymphocytic infiltration of thyroid
- 5) Meningioma is a tumor of central nervous system
- 6) Leiomyosarcoma is a malignant tumor of skeletal muscle
- 7) Adenoma of the colon is a precancerous lesion
- 8) Adenocarcinoma of the prostate can be diagnosed by HCG level
- 9) Psammoma bodies are present in tumors of meninges and ovary
- 10) In emphysema there is permanent dilatation of the air passage

7- Read the following clinical cases and answer the questions (4.5 marks each)

- i. A male patient 67-year-old complaining of difficulty in starting micturition, intermittent urine stream and dribbling after micturition
PSA is slightly elevated
 1. What is the possible diagnosis
 2. What is the microscopic picture of the lesion
 3. What is the complications of this case
- ii. A patient complains of dysuria and terminal hematuria
Cystoscopy shows sandy patches
 1. What is the diagnosis?
 2. Describe other pathological lesions in this condition
 3. What type of bladder carcinoma can be developed in this case and the pathogenesis to develop this cancer



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8- Choose the most appropriate answer: (1.5 marks each)

- 1) A 65-year-old gentleman presents with headache which is most common along the course of superficial temporal artery. On palpation the temples are tender. The patient also complains of transient visual loss. Biopsy of the temporal artery would show which of the following?
 - a) Transmural inflammation demonstrating neutrophils, mononuclear cells with fibrinoid necrosis
 - b) Necrotizing granulomas rimmed by lymphocytes, plasma cells macrophages and giant cells
 - c) Granulomatous inflammation with lymphocyte and multinucleate giant cells with fragmentation of internal elastic lamina
 - d) Onion skin, concentric, laminated thickening of the arterioles
 - e) Homogeneous pink hyaline thickening with loss of underlying structural detail.

- 2) A pathologist performing an autopsy on a 65-year-old male who died after an acute respiratory tract illness notices that the lower lobe of his left lung appeared grayish brown, firmer than the rest of the lung and has dry cut surfaces. Histological sections from the same part show fibrosis infiltrated by macrophages and fibroblasts. What will you label this lesion as?
 - a) Lung abscess
 - b) Squamous cell carcinoma
 - c) Gray hepatization
 - d) Red hepatization
 - e) Atelectasis

- 3) A 60-year-old woman has been feeling tired and sluggish for more than a year. Thyroid gland is not palpable. Serum T4 level is decreased but TSH is markedly increased. Which of the following factors is important in the pathogenesis of this condition?
 - a) Irradiation to neck during childhood.
 - b) Prolonged iodine deficiency
 - c) Anti-microsomal and anti-thyroglobulin antibodies
 - d) Mutations in the RET protooncogene
 - e) Recent viral upper respiratory tract infection



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- 4) A 22-year-old woman presents with fever, weight loss, night sweats and painless enlargement of supraclavicular lymph nodes. A biopsy from one of the enlarged lymph nodes shows binucleated giant cells with prominent acidophilic owl eye nucleoli. What is the most likely diagnosis?
- a) Anaplastic large cell lymphoma
 - b) Diffuse non-Hodgkin's lymphoma
 - c) Hodgkin's lymphoma
 - d) Reactive lymph node hyperplasia
 - e) Mantle cell lymphoma.
- 5) The cell of origin of Ewing's sarcoma is:
- a) Endothelial cell
 - b) Marrow cell
 - c) Osteoblast
 - d) Neuroectodermal cell
 - e) Histiocytes
- 6) A 55-year-old woman has had fever and dyspnea for a month along with a 2 kg weight loss. On physical examination her temperature is 37.7 C. A chest radiograph shows a reticulonodular pattern along with prominent hilar lymphadenopathy. A transbronchial lung biopsy is performed, and microscopic examination shows micronodules of cells collection with no viral inclusions, no fungi, no acid-fast bacilli, and no atypical cells. Which of the following diseases is she most likely to have?
- a) Sarcoidosis
 - b) Silicosis
 - c) Asbestosis
 - d) Tuberculosis
 - e) Usual interstitial pneumonitis



ASWAN UNIVERSITY
FACULTY OF MEDICINE
Pathology Department

Final examination in Pathology
For third year medical students (170 marks)

Date: 5/9/2018

Time: (3 hours) Pages: 4

ALL QUESTIONS TO BE ANSWERED

1- Define the following terms: (2 marks each)

- | | |
|----------------|--------------------|
| - Emphysema | -Hashimoto disease |
| - Mallory body | -Squestrum |
| - Adenomyosis | -Dysentery |

2- Describe gross and microscopic picture of: (10 marks each)

- A. Adenoid cystic carcinoma
- B. Papillary thyroid carcinoma
- C. Myocardial Infarction

3- Mention: (10 marks each)

- A. Histologic types of ovarian tumors
- B. Types of teratoma
- C. Differential diagnosis of lymph node enlargement

4- Compare in a table form between: (8 marks)

- A. Healing by 1st intention and 2nd intention
- B. Nephrotic and nephritic syndrome
- C. Primary and secondary biliary cirrhosis

5- Enumerate: (8 marks each)

- A. Causes of breast mass
- B. Complication of bronchiectasis
- C. Extra intestinal lesion of typhoid Fever
- D. Histologic Types of renal cell carcinoma (RCC)
- E. Types of aneurysm with differentiation.



6- True or false with correction of false (2 mark each)

- 1) COPD is collection of infected fluid between the two pleural membranes that line the lungs
- 2) HTN is One of the most common causes of valvular heart disease
- 3) Cushing's syndrome due to ectopic elaboration of cortisol occurs in adrenal cortical adenoma
- 4) The histologic features of Hodgkin lymphoma include background of malignant lymphocytes
- 5) Subacute bacterial endocarditis always occur in left side of the heart
- 6) Intestinal bilharziasis is predisposing factor for carcinoma
- 7) Granulosa cell tumor one of germ cell tumors
- 8) Bacillary dysentery example for necrotizing inflammation

7- Read the following clinical cases and answer the questions (4.5 marks each)

- i. **A child presents to the emergency department with severe colicky abdominal pain and vomiting.**

Exploration showed invagination of the terminal ileum into the cecum.

A-What is the diagnosis?

B- Mention the possible causes of this lesion in children?

C- Explain why shock may occur in this case?

- ii. **A young female suffered from abnormal uterine bleeding. Hysterectomy was done.**

On sectioning, the uterus shows multiple masses with whorled cut section.

A- What is the most possible tumor

B- Describe the histologic picture of this tumor

C- Mention the types of the degenerative changes occur in this tumor



8- Choose the most appropriate answer: (1.5 marks each)

- 1) A patient suffering watery eye and sneezing frequently in spring and summer will mostly have cellular increase in:**
 - a) Eosinophils
 - b) Monocytes
 - c) Basophils
 - d) Lymphocytes

- 2) Haemochromatosis is an inborn error of _____ metabolism which can lead to cirrhosis as well as pigmented skin, arthritis, cardiomyopathy and 'bronzed' diabetes.**
 - a) Copper
 - b) Iron
 - c) Sulphur
 - d) Calcium

- 3) A patient with a dilated and thin walled left ventricle was admitted to hospital with heart failure. Her left ventricular ejection fraction was 18% (normal value ~60%). Her systolic blood pressure was 96 mm Hg. The most likely cause of her heart failure would be**
 - a. a stiff heart because of fibrosis.
 - b. high output heart failure.
 - c. an increased wall stress.
 - d. mitral stenosis.

- 4) Which one of the following endometrial lesions is associated with the highest risk of developing endometrial carcinoma?**
 - A. Chronic endometritis
 - B. Complex hyperplasia with atypia
 - C. Complex hyperplasia without atypia
 - D. Simple hyperplasia



5) The abscess is lined by

- A- Hyperemic zone
- B- Fibrous wall
- C- Biogenic membrane
- D- Necrotic tissue

6) A granuloma is

- A- Benign tumor
- B- New capillaries and fibroblast
- C- Chronic specific inflammation
- D- Acute inflammation