



Sohag University
Sohag Faculty of Medicine
Department of Medical Microbiology & Immunology



الطرقه الثالثه
ميكرو
د ١١ / ١٩٧٤

Third year Examination

Time allowed: 2 hours

Total marks: 80

(2-6-2018)

I- Give a short account on: (24 marks; 4 marks each)

- 1- Diagnosis of enteric fever.
- 2- Monoclonal antibodies (definition and their uses).
- 3- Diagnosis of meningococcal carrier.
- 4- HIV infection (clinical findings, lab diagnosis and treatment).
- 5- Complications of antibacterial chemotherapy.
- 6- Opportunistic fungal infections (causes and Lab. Diagnosis of ONE of them).

II- Describe the classification of the following and give ONE disease caused by each: (12 marks; 3 marks each)

- 1- Streptococci.
- 2- Hypersensitivity reactions.
- 3- Chlamydiae.
- 4- Herpes viruses.

III- In a table form, compare and contrast between the following: (12 marks; 3 marks each)

- a- Primary & secondary immune response.
- b- Class I MHC & class II MHC.
- c- Toxic types and infective types of food poisoning.
- d- HAV & HBV.

IV- Mention the main functions of the following: (8 marks; 2 marks each)

- 1- Type I interferons.
- 2- Macrophages.
- 3- Bacterial capsule.
- 4- Complement.

V- For each of the following cases, mention the causative agent and the disease produced: (10 marks; 2 marks each)

- 1- A severe bloody diarrhea developed in 20 year old man, followed by anemia and renal failure.
- 2- Cut in the skin developed into black ulcer filled with edema.
- 3- A painful ulcer filled with edema appears on genitalia of sexually active man. His physician recommends use of certain antibiotic.
- 4- A flaccid paralysis appears in baby after ingestion of honey contaminated with spore.
- 5- A 5-year old child with swelling in parotid glands.

VI- Case study (7 marks)

A 35-year-old man presented with a 2-month history of fever, night sweats, and cough with sputum and weight loss. There were enlarged cervical lymph nodes. Chest X-ray showed cavitation in the upper lobe of the right lung. The doctor decided sputum testing for acid-fast bacilli and skin testing.

- a) What would be the diagnosis of this case?
- b) What is the possible aetiologic agent (genus and species)?
- c) Name the type of hypersensitivity of skin testing expected in this patient?

- 17) All the following are macrolides EXCEPT:
- A. Erythromycin
B. Clarithromycin
C. Azithromycin
D. Clindamycin
- 18) Drug/s inducing vasodilation through nitric oxide is (are):
- A. Nitrates
B. Sodium nitroprusside
C. Acetyl choline
D. All of the above
- 19) Nitrates and nifedipine share all the following adverse reactions EXCEPT:
- A. Headache & flushing
B. Hypotension
C. Reflex tachycardia
D. Ankle swelling
- 20) Dexamethasone differs from prednisolone in that is:
- A. Longer acting
B. More potent
C. All of the above
D. None of the above
- 21) One of the following produces bradycardia or heart block:
- A. Captopril
B. Nifedipine
C. Verapamil
D. None of the above
- 22) In congestive heart failure, the following drugs act directly on the myocardium increasing cardiac output EXCEPT:
- A. Digoxin
B. Dopamine
C. Captopril
D. Dobutamine
- 23) Digitalis is given in atrial fibrillation because:
- A. It decrease atrial excitability
B. It depress conductivity of AV node
C. All of the above
D. None of the above
- 24) Methimazole acts by inhibiting:
- A. Iodide trapping
B. Oxidation of iodide to iodine
C. Proteolysis of thyroglobulin
D. Synthesis of thyroglobulin
- 25) One of the following is not indication of vitamin D:
- A. Nutritional rickets
B. Hypoparathyroidism
C. Osteoporosis
D. Hypercalcemia
- 26) The following increase bone formation in osteoporosis EXCEPT:
- A. Ca^{+2} & vitamin D
B. Denosumab
C. Teriparatide
D. None of the above
- 27) The penicillin G preparation with the longest duration of action is:
- A. Benzathine penicillin
B. Sodium penicillin
C. Potassium penicillin
D. All of the above
- 28) One of the drugs commonly used in TB therapy may lead to serious decrease in plasma level of concomitantly used drugs. Which drug is it?
- A. Rifampicin
B. Ethambutol
C. pyrazinamide
D. Isoniazid

- 29) All the following are nephrotoxic **EXCEPT**:
A. Aztreonam B. Gentamycin C. Tobramycin D. Amphotericin B
- 30) The following substance/s is/ are considered as eicosanoids:
A. Prostaglandins B. Leukotriene C. Thromboxane D. All of the above

IV- Clinical Cases: Select the best answer (15 Marks, one each)

Case 1: Mr. M.H. is 45 years old man used to feel epigastric pain and he is diagnosed as peptic ulcer.

- 31) This patient can be treated using one of the following agents
A. ketoconazole. B. Pantoprazole.
C. Hydrocortisone. D. Sulindac
- 32) The drug selected in the previous question acts through one of the following mechanism:
A. Mucosal protection B. $H^+ - K^+$ ATPase enzyme inhibition
C. $Na^+ - K^+$ ATPase enzyme inhibition D. H_2 receptor blocking.
- 33) Advantages of PPIs over H_2 receptor antagonist include:
A. Higher efficacy with better symptomatic relief
B. More prolonged effect given single daily dose
C. More effective in anti H. pylori regimen
D. All of the above
- 34) GERD may benefit from the following **EXCEPT**:
A. Omeprazole B. Ranitidine C. Domperidone D. Scopolamine
- 35) Sodium bicarbonate has the following disadvantage **EXCEPT**:
A. It causes rebound hyperacidity B. It causes gastric distention
C. It has delayed onset of action D. May be dangerous in heart failure

Case 2: Mr. H.E. is 45 years old man who complained of fits; this case was diagnosed as epilepsy.

- 36) If the patient has *grand mal* epilepsy, the drug of first choice is:
A. Carbamazepine B. Valproic acid
C. Diazepam D. Ethosuximide
- 37) The mechanism of action of previous selected drug is:
A. Voltage-dependent inactivation of Na^+ channels
B. Diminution of excitatory transmission
C. Enhancement of GABAergic transmission
D. All of the above mechanisms

- 38) The drug for partial and generalized seizures is:
 A. Carbamazepine B. Phenytoin C. Valproate D. All of the above
- 39) The antiseizure drug which induces hepatic microsomal enzyme is:
 A. Lamotrigine B. Phenytoin
 C. Valproate D. None of the above
- 40) The drug of choice in the treatment of *petit mal* epilepsy is:
 A. Phenytoin B. Ethosuximide
 C. Phenobarbital D. Carbamazepine

Case 3: 30 years old woman is complaining of polyuria, polydipsia and elevated fasting blood glucose level (180 mg %). She was diagnosed as type II diabetes mellitus.

- 41) One of the following drugs can be prescribed:
 A. Insulin B. Glibenclamide C. Prednisolone D. None of the above
- 42) The previously selected drug acts by:
 A. Reducing the absorption of carbohydrate from the gut
 B. Increasing the uptake of glucose in peripheral tissues
 C. Reducing the hepatic gluconeogenesis
 D. Stimulating the beta cells of pancreas to produce insulin
- 43) The currently used second generation sulfonylureas include the following **EXCEPT**:
 A. Glyburide B. Glipizide C. Gliclazide D. Tolbutamide
- 44) The patient get pregnant which of the following can be used?
 A. Biguanides B. Glucagon C. Insulin D. Tolazemide
- 45) The previous selected drug cannot be administered by:
 A. Intravenous route B. Subcutaneous route
 C. Oral route D. Intramuscular route

Good luck