



Q4/ Answer only two of the following.(10 mark).

A-What are the toxic effects of ozone ?

B-Enumerate the factors affecting the concentration of cyanogenic glycoside in plant .

C-What is the treatment of petroleum products toxicity?

Q5/Define only four (8 mark).

Clinical toxicology , Xenobiotic , toxin , LOAEL , side effect , pesticide.

Q6/Answer two of the following (14mark).

A-Enumerate five factors that affect poisoning with xenobiotic.

B-How could kinetic processes increase or decrease toxicity of toxicant, mention by draw .

C /Enumerate the measures steps that used for treatment of poisoning with toxicant.

Q7/Answer two of the following (14 mark)

A-What is bioaccumulation and biomagnification of pesticide?

B-Give three risks of pesticide use and residues.

C-What is herbicide , give three groups and mention the mechanism of action for one .

Q8/Answer two of the following(14 mark).

A-Why grazing of ruminant a plant with highly cyanogenic glycoside is highly dangerous .Give the mechanism and treatment for its toxicity?

B-What is benzodiazepine ,what are the main measures used for its toxicosis treatment?

C/ Enumerate four ways for bacterial contamination during food preparation.



Q1/ Put true or false for eight of the following .(16 mark)

- 1-Inorganic mercury salts are mercuric chloride and methyl mercury.
- 2- The soluble arsenicals are readily absorbed from gastrointestinal tract and through the skin.
- 3- Succimer is a water insoluble analogue of dimercaprol and is preferred chelator and available.
- 4- Chronic toxicosis of zinc in foals have non-painful joint enlargement lasting 7- 21 days.
- 5- The intoxication of Amaryllidaceae results from the action of alkaloid Lycorine on emetic receptor in the central nervous system .
- 6- Excessive amounts of fluoride result in delayed and impaired mineralization of the teeth(brown or black discoloration) and skeleton(exostosis . osteoporosis).
- 7- The cause of death in animals that exposed to sulfuric acid from 18 to 60 mg/m³ succumbed rapidly appeared to be bronchoconstriction.
- 8-The particulate Sulphates (Zinc ammonium sulfate) have an irritant potency, it was found producing a response similar to that produced by histamine.
- 9- Solanine -containing plants, are far more dangerous to adults than to children.
- 10- Hexachlorophene is resistant to biotransformation tends to persist in the environment and bioaccumulates in feed chain.

Q2 / A-Classify the toxic plants according to their component .(8)

B-What is the oxidative type of pollution , and what are the major oxidants found in the atmosphere that characterized it? (8)

Q3/Explain the mechanism of toxicity of only two of the following agents ?(8 mark).

Ethylene glycol ,Pentavalent inorganic arsenicals, Carbon Monoxide.



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Q1: Answer only two questions.

- What are the factors that influence of bioavailability of drug after oral administration?
- Draw the steps of synthesis and uptake of epinephrine and norepinephrine in the sympathetic nerve fiber.
- What are the cholinergic receptors? And what are their antagonists?

Q2: Answer only three questions.

- Define antidiuretics drug, for which cases it is mainly used.
- What are therapeutic uses of atropine?
- Define heart failure, symptoms and mention four common causes of heart failure.
- What are the receptors of epinephrine, give its three therapeutic uses.

Q3: Answer only two questions.

- What is narcotic, classify and give one example each.
- For which group morphine is belong? On which receptor it acts. Give two therapeutic uses for it.
- What is general anesthesia? Enumerate its stages.

Q4: Answer only two question.

- What is antacid, give two indications with one example.
- What is purgative, classify and mention one.
- What is expectorant, classify with one example for each.

Q5: What is the mode of action on bacterial cell for the following antibacterial drug?

- Amoxicillin
- Cefalaxin.
- Tetracycline.
- Gentamycin.
- Chloramphenicol.
- Lincomycin.
- Sulfanilamide
- Trimethoprim.
- Tylosin.
- Polymyxin B

Q6: What are the factors that responsible for anthelmintics failure treatment?

Q7: Explain the right and wrong combinations of the following antibacterial drugs?

- Ampicillin + Imepinem.
- Lincomycin + Chloramphenicol.
- Polymyxin B + Tetracycline.
- Penicillin G + Streptomycin.
- Doxycyclin + amikacin.

Q8: Answer two of the followings:

- Classified corticosteroids according efficacy.
- Enumerate major variables that determine pharmacologic response to drugs applied to the skin
- Depict the neuronal pain arc and hanging the analgesic drug on modulation site.

Q9: Classify analgesic drug group and give an example.

Q10: Enumerate the sexual and metabolic hormone and give main clinical uses.



Q 1

- A- Compare between types of hypersensitivity reaction according to the following: types of antibody and antigens; response time; appearance; histology; and give an example for each one.
- B- Compare between the properties of the primary and secondary antibody responses.

Q 2 Explain briefly the following:

- In primary response T cells require more than one signal for activation and subsequent proliferation into effectors cells.
- Antibody-dependent cell-mediated cytotoxicity.
- General properties of cytokines.
- Functions of T-lymphocytes.
- Effect of Macrophage activation.

Q 3 Define only four of the following:

Macrophage, Thymus, Bursa of Fabricius, B-lymphocyte, IgD.

Q 4 Explain and draw the alternative pathway of complement.

Q 5 Enumerate only three of :

- Types of graft.
- T-cell receptors diversity.

Q 6 Write on only two:

- The advantages up on the active immunization.
- Types of vaccines.
- Mycobacterial immune response.



Q1- Answer (only 3) of the following:

- Give differences between thrombus, chicken fat clot and post mortem clot.
- Give differences between hydropic degeneration, fatty change and cloudy swelling.
- Give differences between hydrosalpinx and pyosalpinx.
- Give differences between Cryptorchidism and testicular torsion.

Q2: Answer (only 3) branches of the following:

- Give differences between bronchiectasis and bronchitis.
- Enumerate types of enteritis.
- Give differences between melanosis and hemosiderosis.
- Give differences between different forms of calcifications.

Q3: Answer (only 3) branches of the following:

- Give differences between erythroid hyperplasia and myeloid hyperplasia.
- Give differences between encephalomalacia and encephalomyelitis.
- Mention congenital anomalies of cerebellum.
- Mention causes and types of hyperplasia.

Q4: A- Explain why (only 3):

- Renal failure lead to fibrous osteodystrophy.
- Iodine deficiency lead to goiter.
- The inflamed area is red in colour.
- Wide haversian canal are seen in osteoporosis.

B- What are the differences between the following (only 3):

- Osteocytic osteolysis and osteoclastic osteolysis.
- Otitis externa and otitis media.
- Osteoporosis and osteopetrosis.
- Ichthyosis fetalis and ichthyosis congenital.

D- Describe briefly the following (only 2):

- Forms of photosensitization.
- Parasitic infection of skin.
- Glaucoma.



Q1-Answer 2 of the following:

- a-Explain the antigenic variation changes in influenza viruses?
- b-What are laboratory methods used for diagnosis of foot and Mouth Disease virus (in the lab) and what are the specimens to be send to lab for diagnosis?
- c-What are the bases for classification of poxviruses (family poxviridae) into different genera?

Q2- Answer 2 of the following:

- a-Explain the following: Defective viruses, Interference in viruses, effect of heat and cold on viruses.
- b-What are the main characters of Retroviridae?
- c-Numerate the genera in Bunyviridae, with example for each.

Q3-Answer the following:

- a-Why viruses are obligatory intracellular parasites?
- b-Many methods are used in diagnosis of viral infection. What are they?
Explain one in detail.
- c-what are the main characters of Birnaviridae?

Q4- Answer one only:

- a-Write the general properties and differencation between *Actinomyces* species and *Actinobaculum suis*.

b-Write about the diagnostic methods used for: 1-Bruceella. 2-Nocardia.

Q5-a- Define the following: 1-Peptioglycan. 2-Flagella. 3-Pili.

b-List the mode of action of antibiotics and explain one only.



Q6-Mention the mechanisms of chemical agents?

Q7-Answer 2 only:

a-Define: K99, Tumbling movement, IMVic corynebacterium, Colicic.

b-What are main toxin and enzymes produced by *S. aureus*?

c-How can you isolate *L. monocytogenes*?

Q8-Answer 2 only:

a-What are toxins produced by *C. Perfringens*?

b-What is pyocin?

c-Describe microscopic and colony appearance of *B. anthracis*.

Q9-a- Define 3 of the following: Mycelium, Ringworm, Arthrospores, and Ascomycetes.

b-Draw 2 of the following: Mucor, Aspergillus flavus, Penicillium citrinum.

Good luck



Q:1/ Answer one of the following : (15 marks)

A – What are the most important species of **Hard Ticks** in Iraq , give the blood parasites which transmit by these ticks .

B – Give the pathogenic agents (or diseases) which transmit by **Stable fly** .

Q :2/ Define and classified **Myiasis** . (15 marks)

Q:3/Answer two of the following : (15 marks)

A – Clinical signs of **Dourine** .

B – Control of **cutaneous Leishmaniasis** .

C – Diagnosis of **Theileriosis** .

Q:4/ A- Fill in the blanks : (6 marks)

1 – The infective stage of *Giardia* is _____ While in *Trichomoniasis* _____ .

2 – _____ is the only ciliated protozoa known to infect _____ and _____ .

3 – Oocyst of _____ contain 4 sporocysts .

B - Factors affecting the epidemiology of *Cryptosporidium parvum* (9 marks)

Q:5/ A - Write briefly about the mode of infection with parasites . (6 marks)

B – Mention the most important factors affecting the distribution of **Haemonchosis** in ruminants (epidemiology) (9 marks) .

Q:6/ List down the most clinical findings of chronic **Fascioliasis** . How to confirm diagnosis ? (15 marks) .

Q:7/ Write in the control of *Taenia solium* infection in man . (10 marks)