



## Questions Bank

### *Fish diseases*

Q1// Fill with blanks:

#### *A-Fungal diseases*

- 1- Common carp & Mirror carp entered to Iraq in 1955 people called it the \_\_\_\_\_ or the \_\_\_\_\_.
- 2- Silver carp(\_\_\_\_\_),its feeding on the phytoplankton
- 3-The Fishenemies are \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_
- 4- Good temperature for fish ponds between \_\_\_\_\_
- 5-*Saprolegniasis* reproduce sexually by male and female gametes contact and asexually by \_\_\_\_\_
- 6- The causative agent for *Branchiomycosis* is \_\_\_\_\_.
- 7- The 1<sup>st</sup> general symptoms for *Branchiomycosis* may be occurs few days \_\_\_\_\_ before death.

8-Hyphae & spores can be seen by microscopical examination in case of \_\_\_\_\_

9- *Ichthyosporidiosis* appears at temp. \_\_\_\_\_

10- We can Cultured *Zygomycotina* on \_\_\_\_\_ slants with 1% bovine serum at 3 - 20 °C optimum temp.

11- *Aspergillosis* occurs by \_\_\_\_\_ which cause granulomatous disease in farm fishes

12- We can see massive infiltration in case of *Aspergillosis* affected tissue with \_\_\_\_\_ and \_\_\_\_\_

### **B-Bacterial diseases:-**

#### **Q2 // Fill with blacks:**

1- The causative agent for Fine tail is \_\_\_\_\_

2- An eroded tail fin is important clinical signs for diagnosis \_\_\_\_\_

3- Necrotic tissue on caudal peduncle appear in case the fish infected by \_\_\_\_\_

4- For treatment Fine rot we can used \_\_\_\_\_ bath , 20mg / L.

- 5- Summer spots observed post- harvest during late spring and summer when the fish infected by \_\_\_\_\_.
- 6- The causative agent for *Motile Aeromonad infection* is \_\_\_\_\_.
- 7- Distended abdomen, clear fluids ; hemorrhagic, \_\_\_\_\_ on clinical sign for *MAI*
- 8- External parasites such as \_\_\_\_\_ mechanism of transmission for *Aeromonad dermatitis*
- 9- Bacterial enteritis infected \_\_\_\_\_ of two years age .
- 10- The pathogen agent which cause bacterial enteritis is \_\_\_\_\_.
- 11- Clotting blood from the vent appear in case of \_\_\_\_\_
- 12- Dark color of \_\_\_\_\_ appear in case bacterial enteritis
- 13- \_\_\_\_\_ Appearance of skin ulceration on different parts of the body, occur commonly in grass carp .
- 14- The causative for Red spots disease is called. \_\_\_\_\_

- 15- Red spots disease characterized by two forms \_\_\_\_\_ & \_\_\_\_\_
- 16- The causative agent gram negative, \_\_\_\_\_ with rounded ends called *Pseudomonas fluorescens* *migula*.
- 17- White skin disease infected the silver carp characterized with white color of the skin, occur usually at \_\_\_\_\_.
- 18- White skin disease occurs by \_\_\_\_\_.
- 19- Whitening of the body surface between the dorsal fin base and tail one of clinical signs for \_\_\_\_\_ disease \_\_\_\_\_.
- 20- *Pseudomonas dermoalba* gram negative rods with \_\_\_\_\_.
- 21- The common strains of *T.B.* most frequently isolated include \_\_\_\_\_.
- 22- *Mycobacterium marinum* \_\_\_\_\_ or \_\_\_\_\_, immotile rods long; gram positive.
- 23- Granulomas in viscera (kidney, spleen, heart), 1 to 4 mm diameter appear in case of \_\_\_\_\_.
- 24- *Mycobacterium* spp. can infect humans \_\_\_\_\_.

- 25- Bacterial Gill Disease caused by \_\_\_\_\_
- 26- Mycosis gill necrosis in pond fishes , caused by the fungus\_\_\_\_\_
- 27- The kidney contain \_\_\_\_\_ is one of lesion for Bacterial Gill Disease.
- 28- Bacterial gill disease one of the most important fish disease has been reported from a \_\_\_\_\_ of cultured cold and warm water fishes.
- 29 - Clumnaris caused by \_\_\_\_\_ .
- 30- Clumnaris has caused mortalities in fingerling , pathogenicity is usually higher at \_\_\_\_\_
- 31- *Flavobacterium columnare* is \_\_\_\_\_, filamentous gram negative rod motile .
- 32- *Flavobacterium columnare* usually congregate into colonies giving a \_\_\_\_\_ appearance
- 33- *Salmonicida* has been identified in common carp \_\_\_\_\_
- 34- *Aeromonas salmonicida* non- motile gram- negative bacterium isolates grown on \_\_\_\_\_are typically grey

35-The spleen is enlarged and the liver can have \_\_\_\_\_  
hemorrhages in case of Ulceration caused by *Aeromonas salmonicida*.

36- *Aeromonas salmonicida* non- motile gram- negative  
bacterium isolates  
grown on agar media are typically grey,  
\_\_\_\_\_ colonies, pathogen  
may survive long periods off the host fish.

### C-Parasitic diseases:-

#### Q1:-Fill with blanks:

- 1- These diseases classified depending the pathogen to  
internal parasites (\_\_\_\_\_ and \_\_\_\_\_) and  
external parasites (\_\_\_\_\_)
- 2- The causative agent for *Ichthyophthiriosis (White Spot, ICH)* is  
\_\_\_\_\_.
- 3- The life cycle for *Ichthyophthiriosis* take place about 3-5 days in  
temp\_\_\_\_\_ in \_\_\_\_\_ water only.
- 4- An advanced cases in *Ichthyophthiriosis* are  
\_\_\_\_\_ and \_\_\_\_\_
- 5- *Trypanosome carassii* is the \_\_\_\_\_ flagellum  
protozoan parasite which found between the blood cells

- 6- Examination of *Trypanosoma* spp a drop of blood for the presence of \_\_\_\_\_.
- 7- There are no chemical treatment for *Trypanosoma* spp a viable to \_\_\_\_\_ these blood dwelling protozoan
- 8- *Chilodonella* is a \_\_\_\_\_ protozoan that causes infected fish to secrete excessive mucus.
- 9- *Chilodonella cyprini* \_\_\_\_\_ shape parasite covered with cilia.
- 10- All kinds of fresh water fish have affected by *Chilodonella cyprini* during winter \_\_\_\_\_
- 11- \_\_\_\_\_ is reported in Iraq by (Shemis -Al-Deen, 1971 and Khalifa , 1978).
- 12- *Trichodina alburni* is circular in shape surrounded by the cilia , with a central ring surrounded by hooks \_\_\_\_\_ as a disc
- 13- Trichodinosis is \_\_\_\_\_ protozoa found on the skin, gills the disease affect all kinds of fresh - water fish .
- 14- Synoname for Mxosporidia is \_\_\_\_\_
- 15- Chronic wasting disease is common among intestinal myxozoans such as with \_\_\_\_\_ Chloromyxum.

“Whirling disease” caused by

\_\_\_\_\_

16- \_\_\_\_\_ or yellowish nodules may appear on target organs infected by Myxosporidia disease

17- Proliferative kidney disease (PKD) is a condition affecting the freshwater, but all salmonids can be affected, and presents with a swollen \_\_\_\_\_ and causes

\_\_\_\_\_

18-The causative agent which responsible for Proliferative kidney disease (PKD)\_\_\_\_\_

19- No treatment available in case of PKD although malachite green and \_\_\_\_\_ had \_\_\_\_\_ been used in the past.

20- \_\_\_\_\_ are intracellular parasites that require host tissue for reproduction.

21- *Kudoa thyrsites* is the myxosporidean parasite (Phylum: Myxozoa) which infects farmed salmonids and the spores are \_\_\_\_\_ in shape.

22- *Kudoa thyrsites* is the \_\_\_\_\_ parasite (Phylum: Myxozoa) which infectes farmed salmonids.



23- Nematodes are smooth, \_\_\_\_\_, relatively long worms which distinguishes them from the flatter

24- Fish become infected with nematodes if they are fed live foods containing infective life stages and allow nematodes to complete their life cycle (\_\_\_\_\_)

25- Microscopic examination for presence of nematode eggs, \_\_\_\_\_, or \_\_\_\_\_.

26- Larval cestodes called \_\_\_\_\_ are some of the most damaging parasites to freshwater fish.

27- Cestodes infect the alimentary tract, muscle or \_\_\_\_\_

28- The life cycle of cestodes is \_\_\_\_\_ with fish used as the primary or intermediate host.

#### D-Viral diseases.:-

#### Q3// Fill with blanks:

1- SVC also infectious dropsy of carp is a contagious & potentially fatal viral disease . It characterized by \_\_\_\_\_ , ascites & ulceration organs.

2- The causative agent for Spring Viraemia of *Carp* is \_\_\_\_\_.

- 3- *Rhabdovirus capripio* , \_\_\_\_\_ shape .the virus isolated 1971 only carp is affected.
- 4- Viral hemorrhagic septicemia(VHS) Is highly contagious & fetal disease of fish .It affects a large no. of fresh and \_\_\_\_\_.
- 5- VHS caused by genus \_\_\_\_\_ virus family *Rahbdoviridae*
- 6- Present the hemorrhage in the skeletal muscles, per visceral adipose tissue in the abdomen, air bladder, intestine & other organs shown in acute form of \_\_\_\_\_
- 7- *Herpes virus* is classified as a double-stranded DNA virus belonging to the family *Herpes viridae* (which includes \_\_\_\_\_)
- 8- These carrier fish may not show signs of HV infection although they may be carrying and/or \_\_\_\_\_
- 9- HV infection may produce severe gill lesions which exhibit as \_\_\_\_\_ with red and white patches.
- 10- Inflammation of swim bladder (I.S.B.) caused by \_\_\_\_\_
- 11- Found three forms for Inflammation of swim bladder are \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_

**Q4// Choose the true answer?**

***A-Fungal diseases:-***

- 1- The another name to Big head carp is \_\_\_\_\_  
a) *White amour* b) *Hypophthalmichthys molitrix* c) *Ctenopharyngodon idella* d) *Aristichthyes nobilis*
- 2- The Silver carp mature age is 3-4 years can jump to. ----  
----- .  
a) 2 meters directly only b) 2 meters directly to noise sound c) 2 meters without directly to noise sound. d) 2 meters with directly to mouth sound.
- 3- The cultivation intensity ranging \_\_\_\_\_ common carp plus 10- 15 % other carp species (*grass, silver carp*).  
a) (4000-5000 fry / hectare ) . b) (2000-3000 fry / hectare ) c) (4000-5000 fingerlings /hectare ) d) 3000-4000 fry) fingerlings / hectare .
- 4-The *Saprolegniasis* diseases occurs mostly at -----  
a) 8 -9°C b) 10 -18°C c) 19 -20°C d) 6°C
- 5- Hyphae of Water mold have been like masses distributed on the skin, seen only when the fishes swimming in the water. --  
-----  
a) White grayish or brownish cotton b) Yellow grayish or brownish cotton c) White reddish or brownish cotton d) Brownish whitish or grayish cotton.
- 6- The Gill rot appears in high temp. \_\_\_\_\_  
a) 20 - 22 °C b) 18 - 19 °C c) 25 - 30 °C d) 10 - 20 °C.

7- For treated Gill rot we can add \_\_\_\_\_/ donem every 14 days

- a) CaO 25 - 30 kg    b) CaO 10 - 15 kg    c) CaO 5 - 10 kg    d) CaO 40 - 50 kg.

8-The fungus which responsible for *Zygomycotina* is called \_\_\_\_\_

- a) *Branchiomyces demigrans*    b) *Dermatomyces hoferi*    c) *Ichthyosporidium hoferi*    d) No one of them .

9- Germinating stages for *Zygomycotina* have \_\_\_\_\_, the neck of the structure constituting of the formal Hyphae.

- a) Flask shaped    b) Elongated shaped    c) Cylinder shaped    d) Filament shaped .

10- We can Cultured *Zygomycotina* on \_\_\_\_\_ slants with 1% bovine serum at 3 - 20 °C optimum temp.    a)

- SDA    b) SDAD    c) SAD    d) SDAS

11- The \_\_\_\_\_ are seen between necrotic gill tissue in case of *Aspergillosis*.

- a) The Hyphae and conidia    b) The Hyphae only    c) The conidia only    d) No one of them.

12- The Ulceration of the skin in case of *Aspergillosis* appears \_\_\_\_\_ in ulceration with inflammatory Zone.

- a) Whitish    b) black    c) bluish    d) reddish.

## B-Bacterial diseases:-

### Q6// Choose the true answer?

- 1- The another name to Fine rot is \_\_\_\_\_
  - a) Tail rot syndromse
  - b) Tail rot syndrome
  - c) Tail rot syndrume
  - d) Tail rot syndreme
  
- 2- The Fine rot is characterized by necrosis of \_\_\_\_\_
  - a) the cranial fin and distal part of the caudal peduncle
  - b) the caudal fin and proximal part of the caudal peduncle
  - c) the distal fin and part of the caudal peduncle
  - d) the caudal fin and distal part of the caudal peduncle.
  
- 3- *Fin rot, is common bacterial disease in fish. it occurs in \_\_\_\_\_*
  - a) *at late summer .*
  - b) *mid to late summer*
  - c) *mid to late spring*
  - d) *mid-winter to late summer*
  
- 4- Presence of white line at lateral margin of the dorsal fin is on of clinical signs for-----
  - a) fine rot
  - b) tail rote syndrom
  - c)fin rat
  - d) syndrome of fine rot.
  
- 5- *A. sobria* is the causative agent for-----
  - a) *Aeromonad dermatitis*
  - b) Mobile Aeromonad infection
  - c) *Aeromonous dermatitis*
  - d) MAIs.
  
- 6- *Aeromonas hydrophila* and *A. sobria*; gram negative, short rod motile, \_\_\_\_\_
  - a)No polar flagellum
  - b) One polar flagellum
  - c) Double polar flagellum
  - d) Singular polar flagellum.

7- *Aeromonas hydrophila* is found in

\_\_\_\_\_

- a) Normally in the ponds      b) Normally in the food      c) Not found in any place  
d) Normally in the intestine.

8- In case of MAI we can Distended abdomen, clear fluids ; hemorrhagic, \_\_\_\_\_

- a) Swollen vent      b) Swollen intestine      c) Swollen intestine/vent  
d) Not one of them.

9- The mortality rate \_\_\_\_\_ in case of bacterial enteritis

- a) up to 90%      b) up to 80%      c) up to 85%      d) until 90%.

10- The causative agent is gram negative rods bacteria called

\_\_\_\_\_

- a) *Fluorescence Pseudomonas intestinalis*      b) *Pseudomonas intestinalis bacteria*  
c) *Intestinalis Pseudomonas fluorescence*  
d) *Pseudomonas fluorescence intestinalis*

11- Present the large amount of fluid in the abdominal cavity appear in case \_\_\_\_\_

- a) *Pseudomonas enteritis*      b) *Pseudomonas intestinalis*  
c) *Fluorescence intestinalis*      d) *Bacterial enteritis* .

12- Body \_\_\_\_\_ discharge is one of clinical signs for bacterial enteritis.

- a) Fluid      b) Mucoid      c) Exudate      d) Fat

13- For treated Red spots disease we can be add \_\_\_\_\_

- a) Oxytetracycline 3-6 mg / fish (I.M.)      b) Oxytetracycline 3-6 mg / fish (S/ C)      c) Oxytetracycline 3-6 mg / fish (I.P. injection)      d) Oxytetracycline 3-6 mg / fish (I.V.)

14-One of clinical signs for Red spot disease \_\_\_\_\_

- b) Inflammation of the vent      b) Abdominal distended      c) Irregular swim      d) Bloody spots of the fins.

15- In case Red spots disease appear of skin \_\_\_\_\_ on different parts of the body

- a) Ulceration      b) Necrosis      c) Irritation      d) Inflammation.

16-In case of Red spots disease we can seen \_\_\_\_\_

- a) Ulceration & congested skin      b) Scales may fall down      c) Hemorrhage around mouth      d) All one of them .

17-The agent which responsible for White skin disease is called \_\_\_\_\_

- a) *Pseudomonas dermatitis*      b) *Pseudomonas dermoalba*      c) *Pseudomonum dermoalba*      d) *Pseudomonas dermoalba*.

18-*Pseudomonas dermoalba* gram negative rods with \_\_\_\_\_

- a) 2 - flagella      b) 1-2 flagella      c) 1-flagellum      d) No one of them .

19-*Pseudomonas dermoalba* responsible for caused highly mortality after \_\_\_\_\_

- a) 1-2 days of infection
- b) 2 days of infection
- c) 3-4 days of infection
- d) 2-3 days of infection

20-The infected fish well swim with raised up tail is one of clinical sign for disease \_\_\_\_\_

- a) Red skin disease
- b) White skin disease
- c) White spots disease
- d) Red spots disease.

21-*Mycobacterium marinum* straight or slightly curved \_\_\_\_\_ rods long; gram positive bacteria.

- a) immotile
- b) mobile
- c) motile
- d) No one of them .

22-Granulomas in viscera appear in case of \_\_\_\_\_

- a) *Mycobacterium marinum*
- b) *Colibacterium chelonae*
- c) *Compylobacterium marinum*
- d) No one of them .

23-One of the sign for T.B. \_\_\_\_\_

- a) Shallow to deep ulcers
- b) Irritation the skin
- c) Abscess in the skin
- d) swim near the pond surface .

24- The stain which used for T.B. detection is \_\_\_\_\_

- a) Modified Ziehl-nielson stain
- b) Ziehl-nielson stain
- c) Hemotoxylin & Eosin
- d) Ziehl -fast stain

25-The fish gill is the organ which responsible for \_\_\_\_\_

- a) respiratory processes
- b) excretory processes
- c) respiratory & excretory processes
- d) No one of them

26- Nutritional gill disease caused by.



- a) toxic agents      b) The Vit. A def.      c) deficiency of  
pantothenic acid      d) folic acid def.

27-The causative agent for Bacterial Gill Disease is \_\_\_\_\_.

- a) *Branchiomyces*      b) *Flavobacterium branchiophila*      c) *Flavobacterium  
branchiomyces*      d) *Branchiomyces dictyolaris*

28- In case of bacterial gills disease we can be used external disinfectants such as

- a) Roccal      b) Aluminum compounds      c) Sodium peroxide      d) Formalin.

29- The pathogen \_\_\_\_\_ responsible for cause Columnaris disease .

- a) *Fladobacterium colonmare*      b) *Flapobacterium columnarese*  
c) *Mycobacterium columnare*      d) *Flavobacterium columnare*.

30-In case of Columnaris disease we can see \_\_\_\_\_ skin lesions on head and caudal regions.

- a) Erosive and necrotic      b) Erosive      c) Necrotic      d) No one of them.

31- \_\_\_\_\_ with 'yellowish' pigmentation in the center of the saddle appear in Columnaris.

- a) Abscesses      b) Ulcers      c) Inflammations      d) Abdominal distended.

32- Swelling of the posterior kidney may be observed in case of \_\_\_\_\_

- a) Clumnaris    b) Clunmaris    c) Clnmuaris    d) Clnumaris.

33- In case of *Aeromonas salmonicida* we can see the hemorrhages on the liver & the kidneys are

\_\_\_\_\_

- a)enlargement    b) friable    c) soft    d) soft or friable.

34- *A. salmonicida* from the farm and its water supply; \_\_\_\_\_are possible sources of infection

- a)grass carp    b) goldfish and carp    c)silver carp    d) big head carp

35- In case of *Aeromonas salmonicida* the reproductive organs are commonly \_\_\_\_\_ & the intestine is often severely congested.

- a)pale    b) inflammation    c) hemorrhaged    d) yellowish color.

### C-Parasitic disease:-

**Q7// Choose the true answer?**

1- The another name to Ichthyophthiriosis is \_\_\_\_\_

- a)White Spot    b)Hypophthalmichthysis    c) Multifiliis    d) Aristichthyesis

2- For treatment Ichthyophthiriosis we can rise the temp.in the

aquarium fish to \_\_\_\_ the parasite will be killed within 12 hours. .

- a) 20 C° b) 30 C° c) 40 C° d) 50 C°

3- We can killed the stages of ICH life cycle in the water by using \_\_\_\_\_ kg/ donem

- a) CaOH 40 - 50. b) CaO 10 - 20 c) CaO 20 - 30 d)CaO 40 - 50 .

4- The protozoans undergo morphological changes within the leech vector eventually forming the infective \_\_\_\_\_ stage that can invade the blood of a fish when the leech next feeds

- a) (metacycline) b) (metacyclic) c) (methacyclin) d) (mathacyclin).

5-Trypanosome carassii is the single polar flagellum protozoan parasite which found between .. -----

- a) the blood plasma b) the blood cells c) the lymphatic cells d) the mature cells

6-Signs of Trypanosoma spp in infected fish are \_\_\_\_\_

- a)Anemia b) Ascetis c) kidney damage d) all a, b and c

7- *Chilodonella cyprini* oval shape parasite covered with cilia ,the cell contain \_\_\_\_\_ and a small anthoer one with rows of cilia

a) granulated cytoplasm three large nucleus b) granulated nucleolus one large nucleus c) granulated nucleus one large nucleus d) granulated cytoplasm one large nucleus

8-The fungus which responsible for *Chilodonelliasis* is called\_\_\_\_\_

c) *Chilodonella cyprini* b) *Chilodonella hoferi* c) *Chilodonella crypio* d) No one of them

9-For treatment *Chilodonelliasis* we can used

\_\_\_\_\_

a) NaOH bath 2.5% for 10 minutes b) NaO bath 2.5% for 10 minutes c) NaCl bath 2.5% for 10 minutes d) Na<sub>2</sub> CO<sub>3</sub> bath 2.5% for 10 minutes.

10-Trichodinasis canbe affect\_\_\_\_\_

a)all kinds of fresh - water fish b) some kinds of fresh - water fish c) many kinds of fresh - water fish d) not kinds of fresh - water fish

11- Dark - blue mucous membrane and Itching the body with the stones inside the ponds are Signs & lesions for\_\_\_\_\_

**b) *Trichomona alburni*** b) *Trichdina alburni* c) *Trochodinal alburni* d)No one of them.

12-We can use \_\_\_\_\_ for treatment of Trichodiniasis.

- a)  $\text{Na}_2\text{SO}_4$  bath 10-15 gm / L for 10 minutes    b) NaO bath 10-15 gm / L for 10 minutes    c) NaCl bath 10-15 gm / L for 10 minutes    d)  $\text{Na}_2\text{CO}_3$  bath 10-15 gm / L for 10 minutes.

13-Myxozoans are parasites affecting a \_\_\_\_\_ of fish tissues.

- a) wide range    b) little range    c) wide percent    d) wide level.

14- Whirling disease" caused by \_\_\_\_\_

- a) *Myxobolus cerebralis*    b) *Myxobolus centralis*    c) *Maxobolus cerebralium*    d) *Myxubolus cenebralis*.

15- Treated the pond with mohua oil cake & lime as per the ph. used in case of infected by \_\_\_\_\_

- a) Mxosporidia    b) Trichodiniasis    c) Chilodonelliasis    d) Trypanosome carassii

16- For PKD the Clinical, histopathology and gross pathological signs combined with history and season of occurrence (\_\_\_\_\_) are characteristic.

- a) warmer months      b) all months      c) winter months  
d) spring months

17- \_\_\_\_\_ is the causal agent and is a myxozoan with four distinct polar capsules which also parasitizes freshwater

- a) *Myxobolus cerebralis*      b) *Tetracapsuloides bryosalmonae*      c) *Tetracapsuloides cerebralis*  
d) *Myxobolus bryosalmonae*

18- *Tetracapsuloides bryosalmonae* is the causal agent and is a myxozoan with four distinct \_\_\_\_\_ which also parasitizes freshwater.

- a) unipolar capsules      b) bi polar capsules      c) no polar capsules  
d) polar capsules

19- Microsporidia infects farmed salmonids and the spores are stellate in shape, with \_\_\_\_\_

- a) four valves and four polar capsules      b) three valves and three polar capsules  
c) two valves and two polar capsules      d) five valves and five polar capsules

20- One of Signs & lesions in case Microsporidia is \_\_\_\_\_

- a) the parasite infected liver and kidney      b) the parasite infected heart
- c) the parasite infected smooth muscles
- d) the parasite infected skeletal muscle

21-Post mortem signs for Microsporidia should be \_\_\_\_\_ using light microscopy

- a) investigated      b) invested      c) instated      d) invocated

22- Nematodes are smooth, cylindrical, relatively long worms which distinguishes them from the flatter \_\_\_\_\_ segmented tapeworms and from the stouter and shorter monogenes (flukes)

- a) segmented tapeworms and from the stouter and long monogenes (flukes)
- c) segmented fine worms and from the stouter and shorter monogenes (flukes)
- d) segmented tapeworms and from the stouter and shorter monogynies (flukes)

23- Nematodes, or roundworms, infect many different species of \_\_\_\_\_

a) fresh fish      b) fresh and wild fish      c) wild fish      d) no one of them

24- Infections by nematodes in the skin or muscle may be visible or be suspected if lumps or \_\_\_\_\_

- a) grub-like growths are seen.      b) glob-like growths are seen.      c) grab-like growths are seen.  
d) grebe-like growths are seen.

25- For treatment Nematodes we can mixed 2 grams of levamisole with 1kg of food fed once a week for three weeks, with a \_\_\_\_\_

- a) repeat treatment in one to two weeks      b) repeat treatment in two to three weeks      c) repeat treatment in four to five weeks      d) repeat treatment in two to three days.

26- Plerocercoids decrease carcass value if present in \_\_\_\_\_, and impair reproduction when they infect gonadal tissue.

- a) muscle      b) skin      c) abdomen      d) viscera

27- Problems also occur when the cestode damages vital organs such as \_\_\_\_\_

- a) liver, spleen and kidney      b) the brain, eye or heart.  
c) gonads, stomach and intestine      d) gills and gills arch



28- One of the most serious adult cestodes that affected fish is the\_\_\_\_\_.

- a) Asian tapeworm    b) American tapeworm    c) European tapeworm    d) Indian tapeworm.

**D-Viral disease:-**

**Q8 // Choose the true answer?**

1- SVC characterized by \_\_\_\_\_

- a) *epidermal* ulceration & ulceration skin    b) dermal necrosis , ascites & inflammation organs.    c) dermal ulceration , ascites & ulceration organs.    d) *epidermal* inflammation , ascites & ulceration organs.

2-The disease which characterized by dermal ulceration , ascites & ulceration is called\_\_\_\_\_

- a) SVC    b) VSC    c) VSC    d) CVS

3- One of the signs and lesions for SVC is\_\_\_\_\_

- a) *Dark black coloration of skin.*    b) *hemorrhage of abdomen*    c) *tan of skin*    d) *no one of them* .

4- The spleen and liver may be enlarged and sometimes is dark red appear in\_\_\_\_\_

a) Acute form of Post mortem lesions for Viral hemorrhagic septicemia(VHS)

b) Sub Acute form of Post mortem lesions for Viral hemorrhagic septicemia(VHS)

c) Chronic form of Post mortem lesions for Viral hemorrhagic septicemia(VHS)

d) Sub chronic form of Post mortem lesions for Viral hemorrhagic septicemia(VHS)

5- Spongy muscle is one signs of \_\_\_\_\_

a) Acute form of signs for Viral hemorrhagic septicemia(VHS)

b) Chronic form of signs for Viral hemorrhagic septicemia(VHS)

c) Sub Chronic form of signs for Viral hemorrhagic septicemia(VHS)

d) Sub acute form of signs for Viral hemorrhagic septicemia(VHS).

6-Signs in Nervous form for Viral hemorrhagic septicemia (VHS)

are \_\_\_\_\_

b) Darkening of the body and Anemia      b) The infected fish  
blacken & the gills lose color      c) Hemorrhage may be seen in the  
eye & gills      d) Twisted the fish body and The infected fish  
swim in circles.

7- Present the yellow color around the vent is one of clinical signs  
for \_\_\_\_\_

- a) VHS      b) SVHS      c) VSHS      d) VIHS

8-The pathogen which responsible for *Carp virus* is  
called \_\_\_\_\_

- a) *Herpes virus*      b) *Reo virus*      c) *Rhabdo virus*      d) *Circo virus*

9- Prevented the infection by Carp pox occurs duo to  
\_\_\_\_\_

- a) Good sanitary measurement      b) Prevent overcrowding      c) Add  
Cao 40-50 kg / doneum      d) All a,b and c.

10-Herpes virus is classified as a \_\_\_\_\_ belonging to  
the family *Herpes viridae*

- a) double-stranded DNA virus      b) double-stranded RNA virus      c)  
single-stranded DNA virus      d) single-stranded RNA virus

11- Necrosis of the caudal part of the bladder with present pus  
accumulation on H<sub>2</sub>S gas in the swim bladder giving bad odor when  
fish are opened are Signs & lesions for \_\_\_\_\_

c) Acute form of Inflammation of swim bladder    b) Sub acute form of Inflammation of swim bladder    c) chronic form of Inflammation of swim bladder    d) No one of them.

12- Inflammation of swim bladder caused by \_\_\_\_\_

b) *Rhabdovirus carpio*    b) *Rhabdovirus virus*    c) *Norhabdo virus carpio*    d) *Herpes virus*

13- Congestion of the anus appear in \_\_\_\_\_ form for Inflammation of swim bladder

a) Acute    b) Sub acute    c) Chronic    d) Sub chronic

**Q9// Put (T) or (F) in the following sentences and corrected the false term?**

**A-Fungal diseases:-**

1-Big head carp does reproduce naturally in the artificial farms

2- *White amour* lived on the grass, herbs and other vegetation in the water live in warmer water.

3- The fish ponds Dryden and spreading the quicklime 0.5 ton /hectare & mix with 15-30 cm water for 15 days.

4- The normal level of O<sub>2</sub> is 5-7mg / liter.

- 5- In case fish diseases diagnosis using anaesthetics for euthanasia is not recommended as some ecto-parasites may be killed or detach rapidly from the fish .
- 6- For treatment fish ponds infected by *Saprolegniasis* add copper sulfate  $\text{CuSO}_4$  1gm / 200L. for 60 minutes , or 1gm / 100 L.
- 7-The stripes become muddily gray pale pink & dark brown (dirty - dark grayish) stripes , this is so characteristic for *Bronchiomycosis* on the gills.
- 8- In case Gill rot the whitened necrotic patches which leads to thrombosis and ischemia the gills .
- 9- Hyphae stage in case of *Zygomycotina*:- Less frequently Flask shaped Hyphae non-septets vary in length to 2mm.
- 10- For controlled the ponds against *Zygomycota* should be disinfected with quick lime.
- 11- Zinkers necrosis may be appears in case of *Aspergillosis*.
- 12-In case of infected by *Aspergillosis* the fish swim at the surface of water, try to inhale air.

### **B-Bacterial diseases:-**

**Q8 // Put (T) or (F) in the following sentences and corrected the false term?**

1. Fin rot, is common bacterial disease in fish. it occurs mid to late summer when fry are harvested and transported from ponds to quarantine tanks.
- 2- Necrosis of the caudal fin and distal part of the caudal peduncle is mainly clinical sign for tail rot syndrome .
- 3- The causative agent is *Aeromonas formicans* isolated from affected fish , it motile gram negative bacteria .
- 4- For prevention Fine rot should be minimize stress during harvest procedures; use only knotless nets; avoid harvesting during cold weather.
- 5- Summer spots appear in case *A. caviae* infection
- 6- *Aeromonas hydrophila* gram positive , short rod motile, singular polar flagellum.
- 7- Ulcerated lesions, margins reddish or hemorrhaging (advanced) appear in case of *Aeromonad dermatitis*.
- 8- Inflammation of anterior part of the intestine pink color of the liver with pigmentation of all the internal organs by the bile pigment occurs in case of MAI
- 9- Bacterial enteritis infected the silver carp of two years age

- 10- The causative agent for bacterial enteritis called *Pseudomonas fluorescence intestinalis* bacteria.
- 11- Swollen & congestion of the vent not appear in case bacterial enteritis.
- 12- Present the large amount of fluid in the abdominal cavity appear in case of bacterial enteritis.
- 13- For treatment fish ponds infected by *Red spots disease* add using oxytetracycline 3-6 mg / fish (I.V. injection)
- 14- The causative agent for Red spots disease is called *Pseudomonas fluorescence migrate*.
- 15- Red spots disease can be infected grass carp.
- 16- Inflammation of the skin & muscle may contain pus appear in case of white spots disease.
- 17- White skin disease characterized with white color of the skin, occur usually at March or May.
- 18- Aeromycin used for treatment *Pseudomonas dermoalba*.
- 19- Whitening of the body surface don't between the dorsal fin base and tail in case *Pseudomonas dermoalba* .
- 20- Present white mucous like material layer which covering the gills in case of White skin disease.

- 21- For prevention T.B. we can use CaO or Ca(OH)<sub>2</sub> to disinfect ponds
- 22- Histological sections of tissue granulomas; for T.B. by microscopical examination, 100× magnification
- 23- Mycobacteriosis exhibited typical white nodules (granulomas) on the viscera.
- 24- Mycobacterium spp. can infect humans (zoonotic); however, the risk is high; gloves should be worn when handling fish suspected of having any bacterial diseases.
- 25- Bacterial Gill Disease caused by *Mycobacterium branchiophila*.
- 26- Hemorrhagic gill dis. caused by toxic agents or physical injury.
- 27- *Flavobacterium branchiophila* have been filamentous orange pigmented cell wall.
- 28- Pathological changes in gill tissues have been divided into five categories.
- 29- Gill infection, eroded lamellae with yellow to white necrotic edge appear in case of Columnaris .
- 30- Microscopic examination for lesions of Columnaris in (skin and gill) by used ; 100 ×magnification.
- 31- *Flavobacterium columnare* is filamentous gram negative rod non motile by gliding mechanism.



32- Potassium carbonates used for treatment Clumnaris.

33- -Salmonicida can be carried by infected fish without showing symptoms .

34- *Aeromonas salmonicida* may survive short periods off the host fish.

35- Hemorrhage at the base of fins & oral cavity may be seen in case of *Aeromonas salmonicida* infection.

36- *A. salmonicida* isolation of bacteria from internal organs (kidney and spleen) in systemic infections is less than revealing sampling superficial ulcers.

### **C-Parasitic diseases:-**

**Q9// Put (T) or (F) in the following sentences and corrected the false term?**

1- The parasite reproduce directly by fusion in to 204-8.... Like Costiasis & Ichthyophthiriosis.

2- *Ichthyophthirius multifiliis* isn't a ciliate protozoan; trophonts, 50-1,000  $\mu\text{m}$  attach to fish .

3- Ichthyophthiriosis localized under the epithelial lining of the gills, fins & between the dermis & epidermis of the skin.

4- When the parasite get immature (Trophozoite) rupture and penetrate the epithelium & escape into water.

- 5- In case of *Trypanosoma* spp no chemical treatment a viable to eradicate these blood dwelling protozoan.
- 6- *Trypanosome carassii* is the single polar flagellum protozoan parasite which found in the blood cells.
- 7- Examination of *Trypanosoma* a drop of blood for the presence of globin flagellates.
- 8- In case *Chilodonelliasis* we can be shown Present the necrotic and ulcerative tissue in the affected gills & skin.
- 9- In case of *Chilodonelliasis* occurs indirect reproduction by simple division on the skin & gills.
- 10- The skin may not become tattered looking & vulnerable to secondary invasion by *Chilodonella cyprini* .
- 11- Itching the body with the stones inside the ponds is one Signs & lesions for Trichodinasis .
- 12-In case of infected fish by Trichodinasis we can't see dead and necrotic skin & gill tissue.
- 13- *Trichdina alburni* is circular in shape surrounded by the cilia , with peripheral ring surrounded by hooks 20-32 as a disc for attachment with a large & a small nucleus the diameter is 26-70 microns.

- 14- Mxosporidia are parasites that are widely dispersed in native and pond-reared fish populations.
- 15- Spores for Nodular disease cannot be observed in squash preparations of the affected area at 200 or 400x magnification or by histologic sections.
- 16- Vary, depending on the target organ. For example, fish may have excess mucus production, observed with infections by Mxosporidia .
- 17- Granulomatous renal swelling is one of clinical signs for PKD
- 18-In case PKD The sporogonic stages of the parasite may not be observed in the infected fish .
- 19- *Tetracapsuloides bryosalmonae* is the causal agent and is a myxozoan with four distinct nonpolar capsules which also parasitizes freshwater.
- 20- In case of Microsporidia infected fish may develop small tumor-like masses in various tissues.
- 21- *Kudoa thyrsites* is the myxosporidean parasite (Phylum: Myxozoa) which infectes farmed salmonids and the spores are straight in shape
- 22- Replication within Microsporidian spores (schizogony) causes enlargement of host cells (hypotrophy).

23- Nematodes are smooth, cylindrical, relatively long worms which distinguishes them from the flatter.

24- Some nematodes can be transmitted indirectly from fish to fish.

25- Granulomas formed around nematode can look like little blue "rock-like" areas in the shape of the worm, but they will be surrounded by a distinct clear area at their very edge.

26- Praziquantel at 2-10 mg/L for 1 to 3 hours in a bath is effective in treating adult cestode infections in ornamental fish.

27- The life cycle of cestodes is extremely varied with fish used as the secondary or intermediate host.

28- Cestodes, also called round worms, are found in a wide variety of animals, including fish. Cestodes infect the alimentary tract, muscle or other internal organs.

#### **D-Viral diseases:-**

**Q10// Put (T) or (F) in the following sentences and corrected the false term?**

1- SVC also infectious dropsy of carp is a contagious & potentially fatal viral disease.

2-There is no treatment, but Spring Viraemia of Carp (SVC) can be treated with Malachite green 3gm/ kg of feed / 3- 4 interval in the mature fish.

3 Hemorrhage & swelling of the gut don't appear in case of Spring Viraemia of Carp (SVC)

4-VHS Is highly contagious & fetal disease of fish .It affects a large no. of fresh and marine fish.

5- In case of VHS found two forms of signs .

6- The infected fish blacken & the gills lose color appear in Acute form signs for VHS

7- Body cavity may be filled with fluid appear in Nervous form post mortem lesion for VHS.

8- The Nervous form of signs for Viral hemorrhagic septicemia don't have significant signs.

9- Carp pox is a highly contagious virus that causes significant morbidity and mortality in silver carp.

10- Bleeding gills, sunken eyes, and pale patches on the skin appear in case of Carp pox.

11- These carrier fish may be shown signs of HV infection although they may be carrying and/or shedding the virus.

12-In case of Inflammation of swim bladder we can't see Curvature of vertebral column.

13- Blood examination show decrease of ESR & Decrease in Hb appear in case of Inflammation of swim bladder

14- Injection of the spawners with antibiotic is one of treatment step for Inflammation of swim bladder.

**Q12// Define the following sentences.**

Ichthyology, Ichthyologists, Saprolegniasis (Water mold), Dermatomycosis, Branchiomycosis (Gill rot), Ichthyosporidiosis (Zygomycotina), Aspergillosis, Tail rot syndrom , Motile Aeromonad infection, Bacterial enteritis, Red spots disease, White skin disease, Mycobacteriosis, Bacterial Gill Disease, Columnaris, Ulceration caused by Aeromonas salmonicid. Trypanosoma spp, Chilodonelliasis, Trichodiniasis, Mxosporidia (Nodular disease), Proliferative kidney disease (PKD), Microsporidia, Nematode (Roundworm) Infections in Fish, Cestodes, VHS, SVC, Carp pox, Inflammation of swim bladder.

**Q13// Answer the following questions**

- 1-Talk briefly about the classification of fish diseases
- 2-Write short notes about cause selection of (common carp) for cultivation
- 3-Mention the mainly characterizations for carp fish
- 4- How can you Characterization of good healthy fishes
- 5- Enumerate the factors affecting fish production.

- 6-Talk briefly about principles of cultivation (Prevention & control)
- 7-Write short notes about clinical and pathological lesions for *Water mold*
- 8-How can you treated fish farm infected by *Water mold*.
- 9-Mention The pathological lesions for *Gill rot* in infected fish.
- 10-How can you the fish farms controlled against *Branchiomycosis*
- 11- List the stages of development for *Zygomycotina*
- 12-Write short notes about Gross lesion for *Zygomycotina*.
- 13-Write short notes about mainly P. M. lesions which occurred in fish infected by for *Zygomycotina*
- 14- Mention the microscopic pathological changes for *Ichthyo Sporediosis*
- 15- How can you described the causative agent for *Aspergillosis* in fish
- 16- Write short notes about mainly clinical and pathological lesions for *Aspergillosis*
- 17- Mention the mainly microscopic pathological changes for *Aspergillosis*
- 18-Talk briefly about treatment for tail rot syndrome
- 19-Write short notes about prevention Fine rot
- 20-Write short notes about prevention against MAI

- 21-Mention the treatment steps for MAI
- 22- How can you treated the fish infected by bacterial enteritis.
- 23- How can you diagnosed of T.B.
- 24-Enumerate the steps of treatment of T.B. affecting fish production.
- 25-Enumerate the Predisposing factors for bacterial gill disease.
- 26-Mention the steps for Control & treatment for bacterial gill disease.
- 27-Enumerate the Predisposing factors for *Clumnaris*.
- 28-Talk briefly about treatment of *Clumnaris*.
- 29-Write short notes about Diagnosis of *Aeromonas salmonicida*
- 30-How can you prevented fish farm from *Aeromonas salmonicida*
- 31-Write short notes about Signs & pathological changes for Chilodonelliasis
- 32-How can you diagnostic infected fish by Trichodinasis
- 33- Write short notes about histological changes for Proliferative kidney disease (PKD)



- 34-Talk briefly about Treatment and control for Microsporidia
- 35- Write short notes about life cycle for Nematode  
(Roundworm) Infections in Fish.
- 36- Write short notes about signs for Viral hemorrhagic  
septicaemia
- 37- Talk briefly about Post mortem lesions for Viral  
hemorrhagic septicemia(VHS)