

- 26- 5th copipodial stage have a phenomenon of phototaxis is present in:
- a) *Lernea cyprinacea* b) *Ergasilus mugilus*
c) *Argulus africans* d) *Sanguinicola clarias*
- 27- The mechanical treatment by inserting sticks or egg-trap sticks present in.....
- a) *Lernea cyprinacea* b) *Ergasilus mugilus*
c) *Sanguinicola clarias* d) *Argulus africans*
- 28- The mechanical treatment by clipping the fertilized female by scissors present in
- a) *Lernea cyprinacea* b) *Ergasilus mugilus*
c) *Sanguinicola clarias* d) *Argulus africans*
- 29- The Length of the life cycle of lernae depends on:
- a) Temperature b) Light
c) Water quality d) Stocking density
- 30-fish culture was used in country reach to high technology and suffering from less of water and land.
- a) Extensive b) Intensive
c) Semi-intensive d) Super-intensive
- 31- Artificial feed are used and not depend on natural feed & oxygen level are predominant factors in fish culture.
- a) Extensive b) Intensive
c) Super-intensive d) Semi-intensive
- 32- was used in the floating cages and hatcheries (incubators).
- a) polyculture b) monoculture
c) Extensive fish culture d) Super-intensive fish culture
- 33- Sorting the different types of fish species during the harvesting time is
- a) advantage of mono-culture b) disadvantage of mono-culture
c) disadvantage of poly-culture d) advantage of poly-culture
- 34- System is worldwide system used especially in countries layed near to water sources (high productivity).
- a) fiberglass pond b) aquarium pond
c) floating cages d) cement pond
- 35- The pond has fish from fingerlings to marketable size and the fish present for 2-3 months is
- a) nursing pond b) rearing pond
c) productive pond d) catch pond
- 36- The pond has fish from hatching for a period 2-3 weeks until become fry 2-4 cm is
- a) rearing pond b) Quarantine pond
c) nursing pond d) catch pond



37- The lernae appearin colour.

- a) Green to brown
- b) Grayish white
- c) Brown to yellow
- d) Red

38-can be seen moving rapidly around the surface of fish and swim away as seen as the fish is netted out for examination and heavy infestation cause mass mortalities especially in young fish due to osmo-regulatory failure and weight loss.

- a) *Lernea cyprinacea*
- b) *Argulus afficans*
- c) *Ergasilus mugilus*
- d) heart worm parasites

39- The infective stage of Argulosis is:

- a) 5th copipodial stage
- b) 1st copipodial stage
- c) 2nd copipodial stage
- d) 3th copipodial stage

40- The pathognomonic lesion of Fish lice is:

- a) Marbling appearance
- b) Linear hemorrhage
- c) focal hemorrhage
- d) White spots

41- Rusty spots on the dorsal surface of the fish can be experimentally induced using

- a) *Asperigillus flavus*
- b) *Candida albicans*
- c) *Phomaherbarum sp.*
- d) *Asperigillus niger*

42- For isolation and identification of *Ichthiophonus hoferi*, we should add to SDA media.

- a) heemp's seeds
- b) 1% bovine serum
- c) 1% glucose
- d) 1% glycerine

43- Ascites is recorded in most of mycotic diseases except in

- a) Phomamycosis
- b) Scolecobasidiosis
- c) Saprolegniosis
- d) Ichthiophoniasis

44- The aetiological agent of winter pest disease can resist salinity up to

- a) 1-2 mg/L
- b) 1-6 mg/L
- c) 8-10 mg/L
- d) 2-8 mg/L

45- Turkey egg like lesions can be observed in.....

- a) winter pest disease
- b) kidney disease
- c) Ichthiosporidiosis
- d) gill rot disease

46- Incubation period in branchiomycosis is.....days.

- a) 1-3
- b) 2-4
- c) 1-2
- d) 2-3

47- To confirm presence of spores of fungi, we have to use stain.

- a) Zeil-Neilson
- b) Geimsa
- c) H&E
- d) PAS

48- Mycotic disease causing marbling appearance of gills is.....

- a) Ichthiophoniasis
- b) Branchiomycosis
- c) Dactylogyrosis
- d) Ergasilosis



Name:

49- Saprolegniosis can be caused by all next fungi except.....

- a) *Saprolegnia* sp.
- b) *Achlya polyandra*
- c) *Aphanomyces* sp.
- d) *Phomaherbarum* sp.

50- Respiratory manifestation could be observed in all next mycotic diseases except.....

- a) Ichthiophoniasis
- b) Branchiomycosis
- c) Candidiomycosis
- d) Saprolegniosis

51- Upnormal swimming standing position with head upward can be observed in.....

- a) Phomannycosis
- b) Branchiomycosis
- c) Ichthiophoniasis
- d) Scolecobasidiosis

52- Red colored gills in branchiomycosis may be due toof blood vessels.

- a) infarction
- b) stenosis
- c) thrombosis
- d) necrosis

53- Mycotic disease causing high economic losses in hatcheries is

- a) Saprolegniosis
- b) Candidiomycosis
- c) Ichthiosporidiosis
- d) Scolecobasidiosis

54- fungi are tissue specific.

- a) *Branchiomycess sanguinis*
- b) *Saprolegnia parasitica*
- c) *Candida albicans*
- d) *Scolecobasidium humicola*

55- Stop feeding is the first key point in treatment of fish infected with.....

- a) Candidiomycosis
- b) Branchiomycosis
- c) Ichthiophoniasis
- d) Saprolegniosis

56- The main predilection seat of phomannycosis is

- a) Kidney
- b) skin
- c) gas bladder
- d) Gills

57- Skeletal anomalies in fish infected with ichthiosporidiosis are due to presence of resting stage in

- a) brain
- b) muscles
- c) spinal cord
- d) liver

58-is one of the main death causes of fish in saprolegniosis disease.

- a) Osmoregulatory failure
- b) Urine retention
- c) Cholangioma
- d) Osmotic failure

59- Ration is the main source of infection if contaminated with spore of.....

- a) *Candida albicans*
- b) *Saprolegnia* sp.
- c) *Ichthiophonus hoferi*
- d) *Phomaherbarum* sp.

60- In water, the infective stage of Ichthiosporidiosis can be destroyed using

- a) sodium chloride
- b) formaline
- c) Acetic acid
- d) chlorine

61- Infectious haematopoietic necrosis virus inactivated at:

- a) 60 °C
- b) 80 °C
- c) 100 °C
- d) 20 °C

62- IHNV prefer water temp. at:

- a) 15-20 °C
- b) 6-8 °C
- c) 20-30 °C
- d) 30-35 °C

63- IHNV can be cultured on:

- a) RTG2
- b) FHM
- c) BF
- d) CCL

64- Incubation period of carp pox virus is:

- a) 2 months
- b) 15 days
- c) 4 months
- d) 6 months



5- Susceptible fish for pox disease:

- a) Tilapia b) Common carp c) Cat fish d) Mugil

66- Cauliflower disease of eels can be treated using:

- a) Quinine sulphate b) CuSO₄ c) Aricyl disodium salt d) KMnO₄

67- The papilloma in cauliflower disease of eels increased in the growth in:

- a) Spring b) Summer c) Winter d) Fall

68- The virus causing the Cauliflower disease present in the

- a) Liver b) Blood c) Spleen d) Kidney

69- Susceptible fish for Cauliflower disease is:

- a) Mugil b) Sea bream c) Tilapia d) European eel

70- The lesion caused by the Cauliflower disease taketo appear:

- a) One year b) Two months c) Five years d) Three days

71- The source of L.V.D virus is the.....

- a) Infected epithelial cells b) Infected blood
c) Infected melt d) Infected serum

72- Lymphocystis cells that found in gut and other internal organs result from:

- a) Feeding on infected tissue b) Metastasis
c) Leeches d) Copepoda

73- The 2nd I.M.H of Clinostomum tilapiae is:

- a) Copepoda b) Aquatic bird c) Fish d) Aquatic snail

74- The pathognomonic sign of yellow grub disease is:

- a) Plugged operculi b) Opened mouth c) Anemia d) Ascitis

75- The anterior end of Gyrodactylus ch.ch by presence of:

- a) 1 papillae b) 4 papillae c) 2 papillae d) 3 papillae

76- The presence of Gyrodactylosis is a sign of:

- a) Poor water quality b) Good water quality c) High salts d) Decreased O₂

77- Quadricanthus parasitized on the gills of:

- a) Carp b) Tilapia c) Mugil d) Cat fish

78- The reproduction of Dactylogyrrus occur in:

- a) Fall b) Winter c) Spring d) Summer

79- Dactylogyrrus appear opaque under the microscope due to the presence of:

- a) Adhesive glands b) Vitelline glands c) Embryos d) Hooks

80- Route of infection of Lymphocystis virus is

- a) Direct contact b) Skin injuries c) Water d) Melt

With best wishes...

Prof. Dr. Mohamed Said M. Gado



FISH DISEASES AND MANAGEMENT EXAMINATION

I- Choose (true) or (false):

- 1- The bronchial epithelium is swollen & the necrotic process spread from the tips of gills toward the gill arch of *Oreochromis niloticus* infected with columnaris.
- 2- The highly virulent strains of *Fl. columnaris*, resulted in extensive tissue damage, in gills particularly.
- 3- The peduncle disease progresses inwardly until the base of all fins.
- 4- Bacterial /Environmental gill disease is characterized by respiratory distress & osmoregulatory impairment.
- 5- *Oreochromis niloticus*, showed white nodules on the gills, kidney, liver & spleen in pm lesions of EPDC.
- 6- The pathognomonic lesion of *Iernea cyprinacea* is marbling appearance in skin.
- 7- Argulus has pre-oral stylet that not only cause local mechanical injuries but also release digestive enzymes giving rise to systemic.
- 8- The prevention is the best method for control of crustacean diseases due to it is very difficult in treatment.
- 9- The presence of crustacean parasites on the external body surface is not indicative for disease occurrence but must be counted/field.
- 10- When use intensive fish culture depend only on natural feed not artificial feed.
- 11- *Branchiomycess sanguinis* live inside the parenchymal tissue of gills.
- 12- Fluffy cotton wool like appearance could be observed in Ichthiophoniasis.
- 13- Branchiomycosis can be observed in seabream fish farms.
- 14- Asperigilliosis is characterized by hemorrhagic ulcer.
- 15- Candidiomycosis is characterized by blister like ulcer.
- 16- The epizootics of IHNV can be decreased by raising the water temp.
- 17- Pox disease decreases the marketable value of the fish due to its contagious nature.
- 18- Cauliflower disease of eels ch.ch by presence of gelatinous milky white lesion.
- 19- The body weight decreased in the Cauliflower disease as the lesion appears on the mouth.
- 20- Gill damage occur in Dactylogyrosis due to protease enzyme production.



Name:

II- Choose only ONE correct answer from the multiple:

1- Outbreaks of columnaris disease occur mostly in:

- a) Summer & early autumn
- b) Early spring & summer
- c) Winter & early spring
- d) Early summer & Early autumn

2- Transmission of columnaris disease occur at a water temperature above:

- a) 10 °C
- b) 15 °C
- c) 20 °C
- d) 8 °C

3- When the gills have been attacked, the necrotic process spread from the tips of gill lamellae toward the gill arch:

- a) Columnaris diseases
- b) peduncle disease
- c) Streptococcosis
- d) EPDC.

4- Necrosis progresses inwardly on the fins until reached the base of fins, except at the caudal fin, where invasion process may be continued, is characteristic of:

- a) *Fl. Columnaris*
- b) *Fl. Bronchiophylum*
- c) *Fl. Psychrophilum*
- d) *Ps. Fluorescens*

5- The incidence of peduncle disease occurs at water temperature below:

- a) 15 °C
- b) 10 °C
- c) 20 °C
- d) 18 °C

6- Rearing young fish in troughs inside until mid-April, a prophylactic procedure for:

- a) Columnaris disease
- b) peduncle disease
- c) Bact.gill disease
- d) Streptococcosis

7- Presence of white to gray sandy – like grains or spots on the gill capillaries is a sign of:

- a) Columnaris disease.
- b) Bacterial gill disease.
- c) Peduncle disease.
- d) Enteric septicemia of cat fish.

8- Outbreaks of bacterial gill disease occur at water temperature :

- a) 8 - 10 °C
- b) 10 – 15 °C
- c) 19 – 25 °C
- d) 12 –18 °C

9- Addition of Pot. Permanganate at a dose of 100mg/l, for one hour, is a remedy for:

- a) Columnaris disease
- b) Peduncle disease
- c) Bact.gill disease
- d) Streptococcosis

10- A cat fish has small cutaneous lesions in the postero-lateral region, developed later into abscesses in the muscle & tail filled with gases, a sign of:

- a) *Ed. Ictaluri*
- b) *Ed. Tarda*
- c) *Fl. Bronchiophylum*
- d) *Fl. Psychrophilum*

11- Oreochromis niloticus, lost its pigmentation, abdominal dropsy & opaqueness of eyes is a characteristic sign of:

- a) EPDC
- b) Enteric septicemia of cat fish
- c) Bacterial gill disease
- d) Bacterial kidney disease

12- An open ulcer on the head, between the eyes of a fish, which is:

- a) *O. reochromis niloticus*
- b) *Mugil cephalus*
- c) Cat fish
- d) Common carp



me:

13- The seasonal incidence of enteric septicemia occurs at:

- a) Late spring, early summer & early fall
- b) Early spring, early summer & early fall
- c) Late spring, late summer & early fall
- d) Early spring, late summer & early fall

14- Kidney of a fish with creamy white granulomatous abscesses which may extend deep in the parenchyma, a sign of:

- a) Bacterial kidney disease.
- b) Peduncle disease
- c) Enteric septicemia of cat fish
- d) EPDC

15- The bacterial kidney disease outbreaks occur at water temperature of:

- a) 7 - 10 °C
- b) 15 - 18 °C
- c) 20 - 22 °C
- d) 22 - 26 °C

16- Cystic cavitation of body musculature, containing opaque serous fluids, a pm lesion of:

- a) Bacterial kidney disease
- b) Enteric septicemia of cat fish
- c) Peduncle disease
- d) Streptococcosis

17- The spleen of fish, enlarged with rounded edges & cherry coloration, a P. M. lesion of:

- a) Peduncle disease
- b) EPDC
- c) Streptococcosis
- d) Bacterial kidney disease

18- In marine fish an enteritis, pale liver & blood in peritoneal cavity are common P.M of:

- a) Columnaris disease
- b) Peduncle disease
- c) Pop eye disease
- d) Bacterial kidney disease

19- The epizootics of pop eye disease occurs when water temperature exceeds:

- a) 10 °C
- b) 20 °C
- c) 12 °C
- d) 15 °C

20- Erratic swimming, uni or bi-lateral exophthalmia & corneal opacity are common signs of:

a) Streptococcosis b) Bact. gill disease c) Peduncle disease d) Bact. Kidney disease

21- The *Argulus africanus* parasites.....to salinity.

a) sensitive b) resist up to 1.5% c) resist up to 3.5% d) very sensitive

22- *Lerna cyprinacea* parasites

- a) resist salinity up to 1.5%
- b) resist salinity up to 3.5%
- c) very sensitive to salinity
- d) sensitive to salinity.

23- The *Ergasilus mugilus* parasites

- a) sensitive to salinity
- b) resist to salinity
- c) Very sensitive to salinity.
- d) sensitive & some resist to salinity.

24- The infective stage of *Lerna cyprinacea* is:

- a) 5th copipodial stage
- b) 1st copipodial stage
- c) 2nd copipodial stage
- d) 3th copipodial stage

25- The parasitic print of *Ergasilus mugilus* is:

- a) focal hemorrhage
- b) linear hemorrhage
- c) Marbling appearance
- d) diffuse hemorrhage