

**Final Exam. Of Fisheries Management**

5 / 1 / 2023

Oceanography, 3<sup>rd</sup> level

Time: 3h.

الامتحان في صفتين

**Answer the following questions:**

**The first question . Write on the following: (20 marks)**

- a) Petersen method
- b) Point method
- c) Fish as parasite

**The second question: put (√) or (X) marks and correct the mistaken sentences (30 marks)**

- 1) The method of known age do not give a true picture about the normal fish growth
- 2) Scales are more accurate than otoliths for age determination
- 3) Larger fish consume more food per day in relation to their weight than smaller individuals.
- 4) Growth rate of immature fish is slower than those of mature fish.
- 5) The feeding activity of the Japanese eel in Taiwan was higher in spring.
- 6) Numerical methods are appropriate for planktonivorous fishes.
- 7) Fish during their early life are carnivorous
- 8) Bottom feeder fish have the eyes on the lower part of the head.
- 9) The greatest concentrations of taste buds in fish are found in the tail region.
- 10) The eyes are less developed in deep sea fish.
- 11) The sucker fish are characterized by superior mouth.
- 12) Cold-water fish require more food than warm-water fish.
- 13) The primary excretory product of bony fish is uric acid.
- 14) Fish are homeothermic animals.
- 15) The main food items of barracudas from the Egyptian water are mollusks.

**The third question: Write a suitable interpretation for the following (20 marks)**

- 1) The food of eels differs according to the shape of their heads.
- 2) Presence of false annuli in scales and otoliths.
- 3) The appearance of scales without focus.
- 4) Otoliths can be used as powerful tools for age determination.
- 5) Changes in the species composition of the fish stomach contents.

**The fourth question: Complete the following (20 marks)**

- 1) The scientific name of two banded sea bream is.....and of the African catfish is .....
- 2) .....does not give a true picture about the normal fish growth
- 3) The greater the seasonal temperature differences,.....
- 4) Fish food in the region of direct subsurface water are represented by.....
- 5) Raddi are defined as.....
- 6) .....is example of grazer fish, it grazes on.....
- 7) The method used in studying food habit and overcome the speed rate of food items digestion is called .....
- 8) Predator fish are characterized by ..... , ..... , .....
- 9) Strainer fish filter water by their .....
- 10) The main food of The European eels in Lake Manzala is .....

*Best wishes,*

*Prof.dr. M. Bahnasawy*