

المستوي الرابع / علوم البحار البيولوجية
القياسات البحرية وتحليل البيانات (١٠٤ ع ب)

Date: 31/ 12/2022

Time: 2 Hours

Mark: 60

الإمتحان في 2 صفحات

Answer the Following Questions:

Question ONE:

(11 marks)

Put ✓ or × and correct the false

- 1- Satellites capture visible imagery and can be used to identify chlorophyll and temperature profiles
- 2- The full instrument (CTD and niskin bottles) is called a rosette
- 3- From submersibles disadvantages, it Cannot stay on one spot compared to surface vessel
- 4- Remotely operated vehicle are occupied, highly maneuverable underwater machines that can be used to explore ocean depths
- 5- The natural resources governed by the EEZ
- 6- the horizontal control is a triangulation system
- 7- The natural mortality rate is a function of fishing effort.
- 8- The tidal phenomena are widely difference at difference places because of the earth's irregular land masses and because of the variation of the depth of water
- 9- Mixed stock fisheries offer a challenge to fisheries managers due to the difficulty in targeting fish of a specific type.
- 11- Stocks are composed of a single species

Question TWO:

(12 marks)

Identify the following items

- 1- Sonde
- 2- Expendable bathythermographs
- 3- Chain survey
- 4- Data buoys
- 5- Threshold values
- 6- Population dynamics
- 7- A cohort
- 8- Catch per unit of effort

Question THREE:

(21 marks)

Answer the following items:

- 1- Identify the maximum sustainable yield and with labeled drawing only show the relationship between it and fishing effort?
- 2- Hydrographic surveys consist of four operations, discuss?
- 3- There are many advantages and disadvantages of traditional methods of Marine: sampling of water and sediment chemistry, discuss?

Question FOUR:

(16 marks)

Complete the missing parts:

- Catch per unit of effort (CPUE) is an index showing(1).....
- This satellite is used as a Key for providing weather forecasts(2)....
- Ocean color can help scientists study(3).....
and.....(4).....
- A niskin bottle is designed to(5).....
- A Sonde is(6).....
- An Xpendable BathyThermograph (XBT) is a probe that is dropped from a ship and measures the(7).....
- Hydrographic charts are prepared with reference to control points located on(8).....
- Horizontal control depends upon a number of factors, such as(9).....and(10).....
- The alternate rise and fall of the surface of sea water caused by the gravitation pull of the moon and sun on the body of water are called(11).....
- Key considerations for water and sediment sampling include.....(12).....(13).....,.....(14).....and(15).....
- Altimetry satellites determine(16).....

With Best Wishes

Dr. Wael El Tahamy

Head of Department: Prof. Dr. Ola AbuSamak