

DAMIETTA UNIVERSITY

FINAL TERM EXAM.

FACULTY OF SCIENCE

Jan 2025

ZOOLOGY DEPARTMENT

المستوي الرابع / علوم البحار البيولوجية

القياسات البحرية وتحليل البيانات (٤٠٤ ع ب)

Date: 9/ 1/2025

Time: 2 Hours

Mark: 60

الامتحان في 2 صفحات

**Answer the Following Questions:**

**Question ONE:**

**(10 marks)**

**Put ✓ or × and correct the false**

- 1- Satellites capture visible imagery and can be used to identify salinity and phytoplankton profiles.
- 2- The full instrument (CTD and Niskin bottles) is called a rosette.
- 3- From submersible disadvantages, it Cannot stay in one spot compared to surface vessels.
- 4- Remotely operated vehicles are occupied, highly manoeuvrable 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- Traversing is usually used for larger areas or on areas with many obstacles
- 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- A covariate is a possible predictive or explanatory variable of the independent variable
- 10- Sites and samples should be statistically independent during water sampling.

**Question TWO:**

**(14 marks)**

**Identify the following items**

- 1- Sonde
- 2- Benchmarks
- 3- Chain survey
- 4- Ocean acidification
- 5- Threshold values
- 6- Operational oceanography
- 7-Datum

**Question THREE:**

**(20 marks)**

**Answer the following items:**

- 1- The marine data are used for many puroposes, commentt?

- 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.
- 4- There are many procedures used for establishing the datum, discuss.

**Question FOUR:**

**(16 marks)**

**Complete the missing parts: .....**

- Sea surface height is measured through a process called .....(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).....
- Shore line survey consists of the following operations.....(12).....,(13)....., and ... (14).....
- Key considerations for water and sediment sampling include ... (15) ...and .....(16).....

*With Best Wishes*

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*Dr. Wael El Tahamy*

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*Head of Department: Prof. Dr. Ayman Hyder*