



TR11 Assessment Statistic Sampling

- The test contains 20 questions
- You have 40 minutes to complete it

1)

True or False

The gonads of a fish are found below the stomach and open out into the mouth of the fish

Answer by ticking the correct answers

☐ True

☐ False

2) Match the swordfish biometric length codes to the description in the lists below.

Answer by drawing lines from the left column to the right column

LJFL

Curved Lower Jaw Fork Length

PAL

Lower Jaw Fork Length

EF

Pectoral-Anal Length

LJFT

Eye-Fork Length

3)

True or False

The volume of the fixative fluid can be four to five times more than the volume of the sample taken for DNA when stored in an Eppendorf tube.

Answer by ticking the correct answers

☐ False

☐ True

4)

Biometric sampling entails collecting biological information from selected species of the catch and includes a range of samples.

Match the sample to the information it requires in the two lists below.

Answer by drawing lines from the left column to the right column

Age and growth information

sampling gonads

Sex and maturity

sampling stomach contents

Length and Weight regression

taking tissue samples for DNA analysis

Diet information

measuring length and weight of individual fish

Accurate species information

collecting otoliths

5)

True or False

DNA samples are taken from the same species to identify if the species can be managed as a single breeding population or as two different stocks.

Answer by ticking the correct answers

[] False

[] True

6)

True or False

Stratified sampling is used to highlight differences between groups in a population. If two species are required to be sampled then only those species need to be selected for sampling. The selection from those selected species can be random.

Answer by ticking the correct answers

☐ True

☐ False

7) Match the biometric length measurements for tuna in the list below.

Answer by drawing lines from the left column to the right column

FD1T

Fork Length

FD1

Curved Fork Length

FL

Curved First Dorsal Length

FT

Pre-Dorsal Length

8)

True or False

The total catch details can be obtained from the vessels catch log or asking the fishing master his estimate of the total catch.

Answer by ticking the correct answers

☐ True

☐ False

9)

Select the correct answers that represent the requirements for Random sampling of a longline for catch composition.

Answer by ticking the correct answers

☐ Record the number and species of fish when a section of line has caught a lot of fish

☐ Select section of the line to sample using a random sampling table or random method to select the sections to sample

☐ Select every alternative hook to sample as it comes up

☐ Select random time periods to sample the line and record all the catch only in those time periods

10) The IOTC Regional Observer Scheme (ROS) has as its core objective: to collect verified catch data and other scientific data related to the fisheries for tuna and tuna-like species in the IOTC area

Answer by ticking the correct answers

☐ False

☐ True

11)

The protocol for taking a picture of a fish,

Select the correct answers below.

Answer by ticking the correct answers

☐ The protocol for taking a picture of a fish to photograph the left hand side

☐ Place the fish on a clear part of the deck

☐ The head should face to the right

☐ The dorsal side must be at the top of the picture

12)

Record the correct calculated percentage from the catch numbers recorded.

Species Number Recorded during observation Calculated percentage of the catch
Oilfish 1734 Dorado 33 Escolar 1743 Sailfish 816 Swordfish 510

Answer by ticking the correct answers

☐ Dorado

☐ Sailfish

☐ Escolar

☐ Swordfish 3

☐ Oilfish

13) Match the shark biometrics length codes to the description in the list below

Answer by drawing lines from the left column to the right column

The length taken over the curve of the trunk from the tip of the snout to the fork in the tail Fork Length (FL)

The length is taken on a straight line from the tip of the snout to the fork in the tail Curved Fork Length” (FT)

The length is taken on a straight line from the tip of the snout to the pre-caudal notch Pre-caudal Length (PCL)

Length taken from the tip of snout to extreme end of tail in a straight line Total Length (TL)

14) True or False Exhaustive sampling is a method of sampling that involves the sampling all the hooks on the first half of the longline for catch composition of the line

Answer by ticking the correct answers

☐ False

☐ True

15)

True or False

The sex of a mature female shark can be seen from its claspers, but these are not visible on an immature shark.

Answer by ticking the correct answers

☐ False

☐ True

16)

True or False

Proportional sampling is a method of sampling that involves the sampling of a random proportion (%) of

a catch and statistically raising the relative percentages for the different species to represent to the totality of catch composition.

Answer by ticking the correct answers

☐ True

☐ False

17) Select the correct tissue samples that can be take for DNA samples for accurate species information

Answer by ticking the correct answers

☐ Fin clip

☐ Gill tissue

☐ Part of the stomach content

☐ Eye of the fish

18) The different sampling strategies can be used to meet the varioussampling requirements for the IOTC.

Select the correct statements below

Answer by ticking the correct answers

☐ The total time required to set and haul the line

☐ The position where the line is set and end of hauling

☐ Size and weight composition of the catch

☐ Biological sub-sample of selected species

19)

The statistical science requires that a sub-set be selected which should be representative of the whole catch.

Record two types of sampling methods or strategies to do this.

Write your answer below

20) Accurate recording detail of tag recoveries is HIGH PRIORITY Match the information to be collected from the two lists below

Answer by drawing lines from the left column to the right column

When measuring a shark	record the tag colour
When measuring a tuna	record the straight fork length
For measuring the carapace of a turtle	record the total length
For a tag from a fish	record the curved