



**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS  
2018/2019 ACADEMIC YEAR**

**FOURTH YEAR FIRST SEMESTER EXAMINATIONS  
MAIN EXAMINATION**

**FOR THE DEGREE OF B.Sc. IN:  
FISHERIES AND AQUACULTURE**

**COURSE CODE:                    AAF 414**  
**COURSE TITLE:                FISH SEED AND LARVAL PRODUCTION**

**DATE: Wednesday 30<sup>th</sup> January 2019**

**TIME: 8 – 10AM.**

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**INSTRUCTIONS TO CANDIDATES**

**Answer ALL questions in section A and ANY TWO questions in section B**

## **SECTION A: ANSWER ALL QUESTIONS (30 MARKS)**

1. Describe briefly the need for optimal temperatures in rearing of larval fish in a hatchery (3 marks).
2. Explain the importance of quarantine in a fish hatchery (3 marks).
3. Describe briefly the suitable feeding regime of Catfish fry in the hatchery (3 marks).
4. Describe briefly the effects of feral fish on quality of brood stock in the hatchery (3 marks).
5. Explain the need for monosex tilapia seeds in aquaculture (3 marks).
6. What is the importance of grading fish in a hatchery (3 marks).
7. Explain the importance of genetic manipulations in quality control of brooders in a fish farm (3 marks).
8. Describe briefly the control of overlapping generations in aquaculture enterprises (3 marks).
9. Differentiate between cross breeding and hybridization of fish in a hatchery (3 marks).
10. What are the advantages of sourcing fish seed from the wild (3 marks).

## **SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)**

11. Discuss the different stages of development of fish seed and larvae in a hatchery (20 marks).
12. Discuss the preparations made in the hatchery before embarking on a fishing mission to collect brood stock from the wild (20 marks).
13. Discuss heat treatment as a method of producing all-male tilapias in a hatchery (20 marks).