

Reg. No .....

Name .....

**M. Sc DEGREE END SEMESTER EXAMINATION - MARCH 2020****SEMESTER 2 : AQUACULTURE AND FISH PROCESSING****COURSE : 16P2AQCT08 : GENETICS AND BIOTECHNOLOGY OF FINFISH AND SHELL FISH***(For Regular - 2019 Admission & Supplementary 2018/2017/2016 Admissions)*

Time : Three Hours

Max. Marks: 75

**Section A****Answer any 8 (2 marks each)**

1. Centromere
2. Chemical structure of chromosome
3. Chromosome banding
4. Genetic engineering
5. Incomplete dominance
6. Sequencing
7. Supermales
8. Tagging methods
9. Vernalisation of oocytes
10. Breeding ingression
11. Bio augmentation
12. Fish vaccines

**(2 x 8 = 16)****Section B****Answer any 7 (5 marks each)**

13. Chromosome Banding Techniques
14. Approaches to genetic improvement
15. Enzymes commonly used in recombinant DNA technology.
16. Enzymes in genetic engineering
17. Factors affecting selective breeding programme
18. Role of steroids in sex reversal
19. What are the important scientific break-through required to realize the full potential of the transgenic fish technology in aquaculture
20. Bioferilizaiton
21. Bioremediation in aquaculture.
22. What are the different immune-stimulants used in fin fish aquaculture

**(5 x 7 = 35)**

**Section C****Answer any 2 (12 marks each)**

23. Explain monosex population and strategies adopted to produce the same.
24. Inbreeding a boon or a curse?
25. Use of genetically modified organisms in aquaculture –comment?
26. Fish cell cultures, development of cell lines and their applications

(12 x 2 = 24)