

UNIVERSITY OF MUMBAI
No. UG/38 of 2015-16

CIRCULAR:-

A reference is invited to the Syllabi relating to the M.Sc. degree programmes **vide** this office Circular No.UG/11 of 2013-14, dated 4th May, 2013 and the Principals of affiliated Colleges in Science and the Head of the recognized Science Institutions concerned are hereby informed that the recommendation made by Ad-hoc Board of Studies in M.Sc. in (Zoology) has been accepted by the Academic Council at its meeting held on 23rd May, 2016 **vide** item No.4.20 and that in accordance therewith, the syllabus as per Credit Based Semester and Grading System M.Sc.(Zoology) Paper Pattern of Biotechnology (Sem. III & IV) is revised, which is available on the University's web site (www.mu.ac.in) and that the same has been brought into force with effect from the academic year 2016-17.

MUMBAI – 400 032

2nd Aug. 2016
To,


(Dr.M.A.Khan)
REGISTRAR

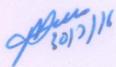
The Principals of affiliated Colleges in Science and the Head of the recognized Science Institutions concerned.

A.C/4.20 /23/05/2016

No. UG/38-A of 2016-17 MUMBAI-400 032 2nd Aug. 2016

Copy forwarded with compliments for information to:-

- 1) The Dean, Faculty of Science,
- 2) The Chairman, Board of Studies in Zoology,
- 3) The Director, Board of College and University Development,
- 4) The Professor-cum- Director, Institute of Distance and Open Learning (IDOL),
- 5) The Controller of Examinations,
- 6) The Co-Ordinator, University Computerization Centre.


(Dr.M.A.Khan)
REGISTRAR

PTO..

AC 23-05-2016

Item No. 4.20

SYLLABUS

M. Sc (Zoology)

Paper Pattern - Biotechnology

Sem III & IV

Credit Based System & Grading System 2016-17

M.Sc Zoology sem III and sem IV Practical question paper pattern

Paper pattern for practical 1 and practical 2 of semester III and IV .

Practical III and IV (specialisation) remains unchanged. The change to be made in view of introducing project work at semester III and semester IV level

Practical paper pattern

Semester III

Zoology- Biotechnology

Course Code PSZOBT3P1

Q1) Determination of viable cell count in the given culture of bacteria by dilution & spreading technique. (25) Marks

OR

Q1) Using mini-prep method isolate plasmid DNA from the given strain of bacteria & show the purity of the isolate by performing agarose gel electrophoresis. (25) Marks

OR

Q1) Preparation of LB agar plate, slant, butt & demonstration of streaking technique using bacterial culture to obtain isolated colonies. (25) Marks

Q2) To estimate the Demonstration of aseptic technique: Work place for aseptic handling, packing glassware (flasks, test tubes, pipettes, petridish) for sterilization, aseptic transfer of liquids pipetting from flask to test tube. (15) Marks

OR

Q2) Estimate number of bacteria in given culture of nephelometry. (15) Marks

Q3) Viva (05) Marks

Q4) Journal (05) Marks

Practical Semester III

Course Code PSZOBT3P2

Project Work (50) Marks

- 1) Introduction
- 2) Concept/Hypothesis
- 3) Survey of literature
- 4) Methodology
- 5) Expected outcome

Practicals paper pattern

Semester IV

Zoology- Biotechnology

Course Code PSZOB4P1

Q1) Demonstrate the effect of medium on growth curves of given microorganisms, using enriched media. (25) Marks

OR

Q1) Demonstrate the effect of medium on growth curves of given microorganisms, using minimal media. (25) Marks

OR

Q1) Prepare a bioreactor column to demonstrate Invertase activity in the bioreactor column. (Day 1) (25) Marks

Q2) Immobilize Yeast cells in calcium alginate, prepare beads & keep them overnight in activation medium. (15) Marks

OR

Q2) Restriction-digest the given DNA sample & demonstrate the separation of fragments by performing agarose gel electrophoresis. Interpret the results by comparing with the standard digests provided. (15) Marks

OR

Q2) Demonstrate the western blotting technique for the given sample of protein. (Day 1) (15) Marks

Q3) Viva (05)Marks

Q4) Journal (05)Marks

Practical Semester IV

Course Code PSZOB4P2

Project Presentation (50)Marks