



ಕ್ರಮಾಂಕ/No. :MU/ACC/CR.20/2018-19/A8

ಕುಲಸಚಿವರ ಕಛೇರಿ
ಮಂಗಳಗಂಗೋತ್ರಿ - 574 199
Office of the Registrar
Mangalagangothri - 574 199

ದಿನಾಂಕ/Date: 06.02.2021

NOTIFICATION

Sub: Modified scheme of V & VI semester Practical Examinations of Zoology,
a core course for B.Sc degree programme-reg

Ref: 1. This office notification of even no. dated: 30.03.2019
2. Decision of the Academic Council meeting
dated: 23.12.2020

Pursuant to the above, modified scheme of V & VI semester Practical Examinations
of Zoology, a core course for B.Sc degree programme is hereby notified for implementation
with effect from the academic year 2021-22 onwards.

The syllabus prescribed for practicals BSCZOP 333 & BSCZOP 334 are modified with
code No. BSCZOP 333 & the syllabus prescribed for BSCZOP 383 & BSCZOP 384 are
modified with code No. BSCZOP 383 in V & VI semesters respectively.

The said changes shall be downloaded from the Mangalore University Website
www.mangaloreuniversity.ac.in

REGISTRAR.

To:

- 1) The Principals of the Colleges Concerned.
- 2) The Registrar (Evaluation), Mangalore University.
- 3) Dr. Bhaskar Shenoy, Chairman, UG BOS in Zoology, Department of Applied Zoology,
Mangalore University.
- 4) The Assistant Registrar, Superintendents, Academic Section, O/o the
Registrar, Mangalore University.
- 5) The Director, DUIMS, Mangalore University – with a request to publish in the
Website.
- 6) Guard File.

CORE SUBJECT: ZOOLOGY

Core/Elective	Course Code	Title of the course	Instruction Hours	Duration of the Examination (Hrs)	Max. Marks			Credits
					Exam	IA	Total	
I Semester B.Sc.								
Group I Core Subject	Theory BSCZOC-131	Animal Diversity-I (Non chordata)	4	3	80	20	100	2
	Practical BSCZOP-132	Animal Diversity-I (Non chordata)	3	3	40	10	50	1
Group II Elective (Supportive to the discipline of study)	Theory BSCZOCE-133	Parasitology and Vector Biology	2	2	40	10	50	1*
Total number of Credits for Core Subject in I Semester: 03								
II Semester B.Sc.								
Group I Core Subject	Theory BSCZOC-181	Animal Diversity - II (Chordata)	4	3	80	20	100	2
	Practical BSCZOP-182	Animal Diversity - II (Chordata)	3	3	40	10	50	1
Group II Elective (Providing an expanded scope)	Theory BSCZOCE-183	Instrumentation and Techniques in Biology	2	2	40	10	50	1*
Total number of Credits for Core Subject in II Semester: 03								
III Semester B.Sc.								
Group I Core Subject	Theory BSCZOC-231	Physiology, Biochemistry and Immunology	4	3	80	20	100	2
	Practical BSCZOP-232	Physiology, Biochemistry and Immunology	3	3	40	10	50	1
Group II Elective (Nurturing students proficiency/skill)	Theory BSCZOCE-233	Aquarium Fish Keeping	2	2	40	10	50	1*
Total number of Credits for Core Subject in III Semester: 03								

IV Semester B.Sc.								
Group I Core Subject	Theory BSCZOC- 281	Histology, Animal Behavior, Applied Zoology	4	3	80	20	100	2
	Practical BSCZOP- 282	Histology, Animal Behavior, Applied Zoology	3	3	40	10	50	1
Group II Elective (Enabling an exposure to some other discipline/ domain)	Theory BSCZOOE- 283	Vermitechnology	2	2	40	10	50	1*
Total number of Credits for Core Subject in IV Semester: 03								
V Semester B.Sc.								
Group I Core Subject	Theory BSCZOC- 331	Cell Biology and Biotechnology	3	3	80	20	100	2
	Theory BSCZOC- 332	Genetics, Biostatistics, Evolution and Paleontology	3	3	80	20	100	2
	Practical BSCZOP- 333	Cell Biology and Biotechnology Genetics, Biostatistics, Evolution and Paleontology	4	4	80	20	100	2
Total number of Credits for Core Subject in V Semester: 06								
VI Semester B.Sc.								
Group I Core Subject	Theory BSCZOC- 381	Reproductive Biology and Developmental Biology	3	3	80	20	100	2
	Theory BSCZOC- 382	Environmental Biology, Toxicology and Wildlife Biology	3	3	80	20	100	2
	Practical BSCZOP- 383	Reproductive Biology and Developmental Biology Project work - Environmental Biology, Toxicology and Wildlife Biology	4	4	80	20	100	2
Total number of Credits for Core Subject in VI Semester: 06								
Total number of Credits for Core Subject in I-VI Semesters: 24								

* Credits for Elective Course will be considered for the entire B.Sc. Programme

V SEMESTER B.Sc.: ZOOLOGY (PRACTICAL)
BSCZOP 333: CELL BIOLOGY AND BIOTECHNOLOGY,
GENETICS, BIOSTATISTICS, EVOLUTION AND PALEONTOLOGY
Scheme of Examination

I. Squash - Make a stained squash preparation of onion root tip or grass hopper testis. 10

(Stained slide preparation with at least one dividing stage - 6 Marks; Report - 1 Mark; labelled diagram - 1 Mark; comment – 2 Mark)

II. Squash - Make a stained squash preparation of salivary gland chromosomes. 10

(Dissecting the gland - 3 Marks; Salivary gland chromosomes slide preparation - 4 Marks; comment - 3 Marks)

III. Identify and comment on the permanent slides **A** & **B** with labeled diagrams. $2 \times 5 = 10$

(1- mitosis and 1- meiosis) (Identification - 1 Mark; Labeled diagram – 2 Mark; Comments -2 Mark)

IV. Solve the genetics problem **A** and biostatistics problem **B**. $2 \times 5 = 10$

(Working out the problem - 4 Marks; Result – 1 Mark)

V. Mounting:

a. Make a temporary mounting of the sex comb. 05

(Mounting of entire tarsus with sex comb on a glass slide with cover slip and focused under low power)

b. Identify the ABO and Rh blood group of the given blood sample and comment on the significance of blood grouping. 05

(Identification of ABO and Rh group $\frac{1}{2} + \frac{1}{2} = 1$ Mark; Reasons $2+1 = 3$ Marks (student should write the antigen antibody reaction of the identified blood group; Significance - 1 Mark)

VI. Identify the *Drosophila* mutants **C** and **D** with reasons. $3 \times 2 = 06$

(Identification - $\frac{1}{2}$ Mark; Chromosome number and site - $\frac{1}{2}$ Mark; Characters -2 Marks)

VII. Identify and comment on **E** (specimen or model from Evolution or Paleontology). 04

(Identification 1 Mark; Labeled diagram - 1 Mark; Comments - 2 Marks).

VIII. Class Record $10 + 10 = 20$

Total = 80

Note: Questions must be framed as per the scheme provided.

VI SEMESTER B.Sc.: ZOOLOGY (PRACTICAL)
BSCZOP 383: REPRODUCTIVE BIOLOGY AND DEVELOPMENTAL BIOLOGY,
ENVIRONMENTAL BIOLOGY, TOXICOLOGY AND WILDLIFE BIOLOGY
SCHEME OF EXAMINATION

I. Identify, draw labeled diagram and comment on permanent slides of developmental stages
A and B. (1 from frog + 1 from chick) 2 x 6 =12
(Identification -1 Mark, Labeled diagram -2 Mark, Comments - 1 x 3 = 3 Marks)

II. a. Identify, draw labeled diagram and comment on C 04
(C- egg or sperm)
(Identification - 1 Mark, Labeled diagram -1 Mark, Comments - 2 Marks)

b. Submission of one permanent slide (Whole mount) 02

III. Identify, draw labelled diagram and comment on the given placental
charts/slides/models/specimens D and E. 2 x 6 =12
(D-histological placenta & E-morphological placenta)

(Identification -1 Mark, Example -1 Mark, Labeled diagram -1 Mark, Comments – 3Mark)

IV. a. Field work and preparation of dissertation 30
(To be evaluated by project guide* + internal examiner** + external examiner** each for 30
marks and average shall be taken).

* Project guide shall assess the candidate based on his/her involvement in the field work and
preparation of dissertation. Marks allotment for the same shall be handed over to HOD in a
sealed cover which will be transmitted to examiners.

** Distribution of marks: Introduction with review of literature - 3 Marks, Materials and
methods – 4 Marks, Result and discussion - 12 Marks, Summary – 2 Mark, References – 3
Mark, Plates containing original photographs - 6 Marks)

b. Brief oral presentation / Viva-voce (based on the contents of dissertation). 10

V. Class Record 10

Total = 80

Note: Questions must be framed as per the scheme provided.
