

## Minutes of meeting of Board of Studies Department of Zoology

The meeting of academic session 2021-22 has been conducted on 12<sup>th</sup> April, 2022 at 12.30 p.m. through zoom platform meeting ID : 99029107855 Passcode: 305628.

Agenda of the meeting was:--

Discussion on PG syllabus and approval to proposed changes (If any).

Approval to the panel of paper setters, moderators and valuers (PG).

Any other points with the permission of chair.

Following members attended the meeting online ---

Nature	Name of the member
Subject experts from outside the parent university to be nominated by academic council	Dr. Madhuri Hambarde Associate professor, Department of Zoology St. Xavier's College, Mumbai.
	Dr. Kishor Pendharkar, Head, Department of Zoology, Fergusson College, Pune.
One expert to be nominated by the VC from the parent university	Dr. S.B.Zade, Professor, Department of Zoology, RTM Nagpur University, Nagpur.
One representative from industry/ corporate sectors/ at allied area relating to placement	Mr. Vivek Khalokar, 24K Amravati Honey, Khalokar Beekeeping Enterprises, 566/2AAishwarya Pratik, NC Kelkar Road, Near Kesari Wada, Narayan Peth , Pune.
One postgraduate meritorious alumnus to be nominated by principal	Mrs. Vidya Vaidya (Chambhare) Lecturer, Jijamata Jr. college, Wardha.
Entire faculty of each specialization	Dr. A. D. Theng Shri. V. P. Khandwekar Dr. V. J. Sharma Dr. S. P. Biswas Miss. T. R. Bhute Miss. R. K. Lonkar
Chairman / Head Dept. of Zoology, BCS, Wardha	Dr. M. R. Chandrakar

Miss. Suchita Tingusle-Faculty member, P. G. Dept. of Zoology, BCS, Wardha could not attend the meeting due to health issues.

### Following points were discussed----

Dr. A.D. Theng welcomed BOS members and started the meeting.

- 1) Dr. A. D. Theng described the proposed changes of the last meeting - PG syllabus; M.Sc. Semester III & IV i.e. introduction of Biotechnology – I & II papers instead of Paper XII Wild life & Avian biology , Paper XVI Radiation & Chronobiology which would be implemented from the academic session 2022-23. These papers are important from the NET/SET/ Competitive examination point of view. The changes had been unanimously accepted.

- 2) Dr. A.D. Theng also discussed there were some repetitive practicals in PG Semester I, II, III & IV. So the repetitive protocols of Semester III & IV were proposed to be changed and were unanimously accepted.
- 3) Panel of examiner, paper setter, valuer for PG had been discussed and approved.

Meeting ended with expressing vote of thanks by V. P. Khandwekar.

Chairman



Board of Studies  
(Head, Dept. of Zoology)

Head / Incharge  
Department Of Zoology  
Bajaj College Of Science, Wardha

Place :- Wardha

Date:- 12/4/2022

## AGENDA

**Approval to proposed changes in PG syllabus  
(Semester III and Semester IV).  
To be implemented from 2022-23**

Existing Papers	Proposed Papers	Justification
Deletion of paper 12 and paper 16 from curriculum.  Paper 12 : ( Wildlife and avian Biology) Paper 16 : (Radiation and Chronobiology)	Introduction of paper <b>Biotechniques 1 and Biotechniques 2</b>	Change in foundation course Previous paper 12 (Wildlife and avian Biology) and 16 (Radiation and Chronobiology) are proposed to be replaced by Biotechniques 1 and 2 as a part of CBCS curriculum. These papers will be offered to PG Zoology students only. (please check file in attachment ) While PG Department of Zoology offers Human physiology 1 and 2 for other departments students who like to opt it under CBCS scheme. <b>Justification:</b> Biotechnique paper 1 and 2 will cover many topics in NET/SET syllabus.

Sem	Nature of Paper	Paper	Paper Name
Sem 1	Core	Paper 1	Structure and Function of Invertebrates
	Core	Paper 2	Biochemistry- 1
	Core	Paper 3	Cell Biology and Genetics
	Core	Paper 4	Developmental Biology (Principles and Applications)
Sem 2	Core	Paper 5	Structure and Function of Vertebrates
	Core	Paper 6	Comparative Endocrinology
	Core	Paper 7	Molecular Biology and Biotechnology
	Core	Paper 8	Biochemistry -2
Sem 3	Core	Paper 9	Parasitology and Immunology
	Specialization	Paper 10	Animal Physiology
	Core -Elective	Paper 11	Animal Physiology
	Foundation course	Paper 12	Human Physiology (For other PG students)
		Paper 12	Biotechniques-I (For PG Zoology students)
Sem 4	Core	Paper 13	Biotechnique, Biostatistics, Ethology, Toxicology and Bioinformatics
	Specialization	Paper 14	Animal Physiology
	Core -Elective	Paper 15	Animal Physiology
	Foundation course	Paper 16	Applied Human Physiology (For other PG students)
		Paper 16	Biotechniques-II (For PG Zoology students)

## AGENDA

Approval to a new list of paper setters/moderators and evaluators /moderators



**Bajaj College of Science, Wardha**  
**(An Autonomous College)**  
**Department of Zoology**  
**Syllabus for M.Sc. Zoology (Semester Pattern)**  
**Semester – III**  
**Choice Based Credit System**

With effect from Academic Year 2018-19 (Continued in 2021-22)

**Core (Subject Centric)- I**

**Paper- XII - BIOTECHNIQUES – I\* (for by PG Zoology students)**

PG- ZOO (07)- S3-T4-FC1

**Unit I : MICROSCOPY**

- 1.1 Properties of light: Nature of light, wavelength, reflection, refraction, polarization
- 1.2 Microscopes: Principles and application
- 1.3 Light Microscopy, Phase Contrast Microscopy, Fluorescence microscopy
- 1.4 Scanning and transmission electron microscopy and Atomic Force microscopy

**Unit II: SPECTROSCOPY**

- 2.1 Spectroscopy: Basic Principles and applications
- 2.2 Types of Spectroscopy : UV visible, IR absorption spectroscopy, Raman Spectroscopy
- 2.3 Principle and Biological application of Mass Spectroscopy
- 2.4 X-ray diffraction (XRD) and NMR

**Unit III: Separation techniques in Biology**

- 3.1 Chromatography : Principle and types
- 3.2 Adsorption and partition chromatography
- 3.3 Size exclusion and ion exchange chromatography
- 3.4 Molecular separation by affinity chromatography,

**Unit IV: Microbiological Techniques**

- 4.1 Media preparation and sterilization.
- 4.2 Inoculation and growth monitoring.
- 4.3 Use of fermenters.
- 4.4 Microbial assays

**Bajaj College of Science, Wardha**  
**(An Autonomous College)**  
**Department of Zoology**  
**Syllabus for M.Sc. Zoology (Semester Pattern)**  
**Semester – IV**  
**Choice Based Credit System**  
With effect from Academic Year 2018-19 (Continued in 2021-22)

**Core (Subject Centric)- II**

**Paper- XVI - BIOTECHNIQUES – II\* (for by PG Zoology students)**  
PG- ZOO (07)- S4-T4-FC2

**Unit I: Molecular Biology Techniques**

- 1.1 Phage display and yeast two hybrid assay
- 1.2 Transcript analysis
- 1.3 Foot printing assay and site directed mutagenesis
- 1.4 Biosensors: Principle, types and uses

**Unit II: *Drosophila* Culture Techniques**

- 2.1 Design and functioning of *Drosophila* culture laboratory.
- 2.2 Types of *Drosophila* culture media.
- 2.3 Cell proliferation assay.
- 2.4 Cell viability assay, MTT assay

**Unit III: Histochemical and Immunochemical Techniques**

- 3.1 Tissue fixation and processing : Types of fixatives, Principles and methods of fixation
- 3.2 Sectioning and Staining of tissue sections: Instruments used in sectioning, Principle, types and staining methods of tissues
- 3.3 Immunohistochemistry Principles, method of application of Immunohistochemistry and immunofluorescence techniques for localization of proteins in tissues.
- 3.4 In situ hybridization of nucleic acids

**Unit IV: Radioisotope and mass isotope techniques in biology**

- 4.1 Radioactive isotopes and half life of isotopes
- 4.2 Metabolic labeling.
- 4.3 Sample preparation for radioactive counting.
- 4.4 Safety guidelines Autoradiography.




Zoom Meeting

Recording Paused

## AGENDA - 2

**Approval to proposed changes in PG syllabus (Semester III and Semester IV).  
To be implemented from 2022-23**



38°C  
Haze


ENG IN 12:16  
12-04-2022

Zoom Meeting

You are viewing Dr. Amol Theng's screen

Recording Paused

Existing Papers	Proposed Papers	Justification
<p>Deletion of paper 12 and paper 16 from curriculum.</p> <p>Paper 12 : (Wildlife and avian Biology)</p> <p>Paper 16 : (Radiation and Chronobiology)</p>	<p>Introduction of paper Biotechniques 1 and Biotechniques 2</p>	<p>Change in foundation course Previous paper 12 (Wildlife and avian Biology) and 16 (Radiation and Chronobiology) are proposed to be replaced by Biotechniques 1 and 2 as a part of CBCS curriculum. These papers will be offered to PG Zoology students only. (please check file in attachment ) While PG Department of Zoology offers Human physiology 1 and 2 for other departments students who like to opt it under CBCS scheme. Justification:Biotechnique paper 1 and 2 will cover many topics in NET/SET syllabus.</p> <p style="text-align: right;"><a href="#">Syllabus</a></p>



Unmute Stop Video Security Participants Chat Share Screen Resume/Stop Recording Reactions Apps More

38°C  
Haze

ENG IN 12:17  
12-04-2022

Zoom Meeting | You are viewing Dr. Amol Theng's screen | View Options

Recording...

### AGENDA - 3

Approval to a new list of paper setters/moderators and evaluators /moderators

102

Participants: 13

Unmute | Start Video | Security | Chat | Share Screen | Pause/Stop Recording | Reactions | Apps | More | End

38°C | Hazo | ENG IN | 12:27 | 12-04-2022

Zoom Meeting | Recording...

Participants: 13

Unmute | Start Video | Security | Chat | Share Screen | Pause/Stop Recording | Reactions | Apps | More | End

38°C | Hazo | ENG IN | 12:35 | 12-04-2022