



# HOLY CROSS COLLEGE

ACCREDITED BY NAAC WITH 'A+' GRADE (CYCLE:2)

Tripura University Reg. Code: 17

Jubatara, P.O. Lembucherra, Tripura West Pin-799210

Phone: 0381-2915930, +91 9402315672

email- principalhccagt@gmail.com

Web: www.holycrosscollege.in

"Educating hearts and minds"

## DEPARTMENT OF BOTANY

Ref. No.F.1/HCC/BOT/Std./Oct./2023/01

Date: 04.10.2023

### NOTICE

This is to notify that the Department of Botany, Holy Cross College, Agartala will arrange Class Test for the students of 1<sup>st</sup> (NEP), 3<sup>rd</sup> (TDPH) and 5<sup>th</sup> (TDPH) semester students within 13.10.2023. All are hereby instructed to be present on the exam days to appear in the internal examination.

*Dr. Debasree Lodh*  
04/10/2023

Dr. Debasree Lodh  
Head, Department of Botany  
Holy Cross College, Agartala

**HEAD**  
Department of Botany,  
HOLY CROSS COLLEGE, AGARTALA



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## DEPARTMENT OF BOTANY

No. F.2/HCC/BOT/Fct./Oct./2023/02

Date: 04.10.2023

### NOTICE

This is to notify that the Department of Botany, Holy Cross College, Agartala will arrange class test as brainstorming sessions for the students of 1<sup>st</sup>, 3<sup>rd</sup> and 5<sup>th</sup> semester Botany (Major) students within 13.10.2023 to evaluate the slow and advanced learner for the academic year 2023-2024. In connection with this, all the faculty members of the Department are requested to submit the questions on their concerned topics that has been discussed till date.

*Dr. Debasree Lodh*  
04/10/2023

Dr. Debasree Lodh  
Head, Department of Botany  
Holy Cross College, Agartala

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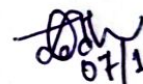
## DEPARTMENT OF BOTANY

No. F.2/HCC/BOT/Fcvt./Nov./2023/02

Date: 07.11.2023

### NOTICE

This is to inform all the Faculty Members that, Department of Botany, Holy Cross College, Agartala is going to conduct Class Test as a part of Internal Examination for 1<sup>st</sup> (Major, Minor, Interdisciplinary), 3<sup>rd</sup> and 5<sup>th</sup> semester (Honours and General) students, during the month of December, 2023. All are hereby requested to (i) share the topics for assignment submission, class presentation, syllabus for internal examination within 12.11.2023; (ii) send the questions for the internal examination from the assigned topics for both theory and practical papers to the HOD within 28.11.2023 and (iii) complete the answer-script evaluation process by seven days from the last date of internal examination.

  
07/11/2023

Dr. Debasree Lodh  
Head, Department of Botany  
Holy Cross College, Agartala

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## DEPARTMENT OF BOTANY

No.F.1/HCC/BOT/Std./Nov./2023/04


Date: 24.11.2023

### Notice

Internal Examination Syllabus (December, 2023) for 1<sup>st</sup>, 3<sup>rd</sup> & 5<sup>th</sup> Semester Botany Major, Minor, Interdisciplinary, Honours & General are as follows:

<b>1st Semester- Major</b>	
<b><u>1st Semester Major: Paper 1 (Theory)</u></b> <ul style="list-style-type: none"><li>Algal Reproduction</li><li>Pigments and reserve food material</li><li>Bacterial reproduction: Asexual - Binary fission, Conidia, Budding, Cysts and Endospore (structure &amp; formation).</li><li>Genetic recombination in bacteria - Transformation, Transduction (Generalized &amp; Specialized) and Conjugation (F-factor, F+ x F<sup>-</sup>, Hfr x F<sup>-</sup>).</li><li>Structure, Reproduction &amp; life cycle of <i>Ectocarpus</i>.</li></ul>	
<b><u>1st Semester Major: Paper 2 (Theory)</u></b> <ul style="list-style-type: none"><li>Different types of asexual &amp; sexual spores of Fungi.</li><li>Structure, Reproduction &amp; life cycle of <i>Rhizopus</i>.</li></ul>	<b><u>1st Semester Major: Paper 2 (Practical)</u></b> <ul style="list-style-type: none"><li>Workout of <i>Oedogonium</i>.</li><li>Identification of <i>Volvox</i> and <i>Polysiphonia</i>.</li></ul>
<b>1st Semester- Minor</b>	
<b><u>1st Semester Minor (Theory)</u></b> <ul style="list-style-type: none"><li>Importance of Mushroom</li><li>Precautions used in Mushroom cultivation</li><li>Bacterial reproduction- binary fission and endospore formation</li><li>Genetic recombination in bacteria -(transformation, transduction and conjugation)</li><li>General account of Phycomycetes.</li><li>Life history of <i>Rhizopus</i>.</li></ul>	<b><u>1st Semester Minor (Practical)</u></b> <ul style="list-style-type: none"><li>Workout of <i>Oedogonium</i>.</li><li>Identification of <i>Volvox</i> and <i>Polysiphonia</i>.</li></ul>

<b>1st Semester (Interdisciplinary)</b>	
<ul style="list-style-type: none"> <li>▪ Bacteria: General characters of bacteria; Morphological forms, Cell structure, Genetic recombination in bacteria-transformation, Transduction and Conjugation.</li> <li>▪ General characters of Bryophytes including amphibian nature.</li> <li>▪ General properties of plant virus.</li> <li>▪ General characters &amp; Thallus organization of Algae.</li> <li>▪ Economic importance of Algae.</li> </ul>	
<b>3<sup>rd</sup> Semester (Honours)</b>	
<b><u>3rd Semester (Honours) - Theory</u></b> <ul style="list-style-type: none"> <li>❖ General characteristics of Fungi with different terminologies</li> <li>❖ Symptoms: Necrotic, Hypoplastic and hyperplastic.</li> <li>❖ Economic Botany- (Scientific name, Family, Uses).</li> <li>❖ General characteristics of Plant Virus.</li> <li>❖ Bacteria- Cell structure.</li> </ul>	<b><u>3rd Semester (Honours) - Practical</u></b> <ul style="list-style-type: none"> <li>❖ Workout of <i>Polyporus</i></li> <li>❖ Identification of Pathological Specimen</li> </ul>
<b>3<sup>rd</sup> Semester (General)</b>	
<b><u>3rd Semester (General) – Theory</u></b> <ul style="list-style-type: none"> <li>❖ Lichen (whole part)</li> <li>❖ Symptoms: Necrotic, Hypoplastic and hyperplastic.</li> <li>❖ Economic Botany- (Scientific name, Family, Uses).</li> <li>❖ General characteristics of Plant Virus.</li> </ul>	<b><u>3rd Semester (General) - Practical</u></b> <ul style="list-style-type: none"> <li>❖ Workout of <i>Polyporus</i></li> <li>❖ Identification of Pathological Specimen</li> </ul>
<b>5<sup>th</sup> Semester (Honours)</b>	
<b><u>5<sup>th</sup> Semester (Honours) – Theory</u></b> <ul style="list-style-type: none"> <li>• Cell cycle</li> <li>• Mutation</li> <li>• Chromosome morphology</li> <li>• Chemical structure of nucleic acid.</li> <li>• Types of Restriction Enzymes.</li> <li>• Mendelian Inheritance.</li> <li>• Gene Interaction.</li> <li>• Modified dihybrid ratio (12:3:1; 9:3:4)</li> <li>• Linkage &amp; Crossing over.</li> <li>• Mean, Median Mode.</li> </ul>	<b><u>5<sup>th</sup> Semester (Honours) - Practical</u></b> <ul style="list-style-type: none"> <li>• Statistical analysis</li> <li>• Identification with reasons from permanent slides.</li> </ul>
<b>5<sup>th</sup> Semester (General)</b>	
<b><u>5<sup>th</sup> Semester (General) – Theory</u></b> <ul style="list-style-type: none"> <li>• Chromosome morphology</li> <li>• Chemical structure of nucleic acid.</li> <li>• Cell cycle</li> <li>• Cell division</li> <li>• Mendelian Inheritance.</li> <li>• Modified dihybrid ratio (12:3:1; 9:3:4)</li> <li>• Linkage &amp; Crossing over.</li> <li>• Photosynthesis</li> </ul>	<b><u>5<sup>th</sup> Semester (General) - Practical</u></b> <ul style="list-style-type: none"> <li>• Relationship between transpiration &amp; evaporation.</li> <li>• Comparison of imbibition of water by starchy, proteinaceous &amp; fatty seeds.</li> </ul>

  
 HOD, Department of Botany  
 Holy Cross College, Agartala

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## DEPARTMENT OF BOTANY

Ref. No.F.1/HCC/BOT/Std./Nov./2023/09

Date: 30.11.2023

### NOTICE

This is to inform all the students that the Department of Botany, Holy Cross College, Agartala is going to conduct a Class Test as a part of Internal Examination for 1st (NEP), 3rd and 5th Semester (Major, Minor, Interdisciplinary, Honours, General) students during the 1st and 2nd week of December, 2023. All are hereby instructed to be present on the exam days to appear in the internal examination.

*DLH*  
30/11/2023

Dr. Debasree Lodh  
Head, Department of Botany  
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**HEAD**  
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## DEPARTMENT OF BOTANY

### NOTICE

Ref. No.F.1/HCC/BOT/Std./Jan./2024/02

Date: 09.01.2024

This is to inform all the students that the Department of Botany, Holy Cross College, Agartala is going to conduct a Class Test as a part of Internal Examination for 1st (NEP) Major, Minor, Interdisciplinary students during the 3rd week of January, 2024. All are hereby instructed to be present on the exam days to appear in the internal examination.

Dr. Debasree Lodh  
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## DEPARTMENT OF BOTANY

No. F.2/HCC/BOT/Fclt./Jan./2024/02

Date: 09.01.2024

### NOTICE

This is to inform all the Faculty Members that, Department of Botany, Holy Cross College, Agartala is going to conduct Class Test as a part of Internal Examination for 1<sup>st</sup> (NEP) Major, Minor and Interdisciplinary students from 16.01.2024. All are hereby requested to (i) share the syllabus for internal examination within 10.01.2024; (ii) send the questions for the internal examination from the assigned topics for both theory and practical papers to the HOD within 12.01.2024 and (iii) complete the answer-script evaluation process by seven days from the last date of internal examination.

Dr. Debasree Lodh  
Head, Department of Botany  
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## DEPARTMENT OF BOTANY

No. F.2/HCC/BOT/Fclt./May./2024/02

Date: 02.05.2024

### NOTICE

This is to inform all the faculty members that, Department of Botany is going to conduct Class Test as a part of Internal Examination for 2nd (NEP), 4<sup>th</sup> and 6<sup>th</sup> semester (Honours and General) students, during the month of May, 2024. All are hereby requested to (i) share the syllabus for internal examination within 5<sup>th</sup> May, 2024; (ii) send the questions for the internal examination from the assigned topics for both theory and practical papers to the HOD within 20<sup>th</sup> May, 2024 and (iii) complete the answer-script evaluation process by four days from the last date of internal examination.

  
02/05/2024

Dr. Debasree Lodh  
Head, Department of Botany  
Holy Cross College, Agartala

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## DEPARTMENT OF BOTANY

No.F.1/HCC/BOT/Std./May./2024/03

Date: 06.05.2024

### Notice

Internal Examination Syllabus (May, 2024) for 2<sup>nd</sup> (NEP), 4<sup>th</sup> & 6<sup>th</sup> Semester Botany Major, Minor, Honours & General are as follows:

<b>2nd Semester- Major (NEP)</b>	
<b><u>2nd Semester Major: Paper 3 (Theory): BT 103C</u></b>	
<ul style="list-style-type: none"><li>▪ <b>Unit I:</b> <i>Riccia</i> sp. and <i>Marchantia</i> sp.: External &amp; internal structure: sporophytic &amp; gametophytic structure and life cycle.</li><li>▪ <b>Unit II:</b> General Characters of pteridophytes: Type genus- <i>Lycopodium</i>.</li><li>▪ <b>Unit III:</b> <i>Cycas</i> sp. -Life Cycle (Morphology, Anatomy, Reproduction).</li><li>▪ <b>Unit IV:</b> Significant contributions of Indian Paleobotanist: Dr. Birbal Sahani, Definition of fossil, Conditions required for fossilisation, fossilisation process, Types of fossil (Body fossil - Micro- and Megafossils, Trace fossil, Chemical fossil, Index fossil), Modes of preservation (after Schopf, 1975).</li></ul>	
<b><u>2nd Semester Major: Paper 4A (Theory): BT 104C</u></b> <ul style="list-style-type: none"><li>▪ Indian Gondwana flora system – Three fold division with major mega-fossil assemblages.</li></ul>	<b><u>2nd Semester Major: Paper 4B (Practical): 104C</u></b> <ul style="list-style-type: none"><li>▪ Workout- <i>Lycopodium</i> sp. &amp; <i>Selaginella</i> sp.</li><li>▪ Identification.</li><li>▪ Practical Note Book Submission.</li></ul>
<b>2nd Semester- Minor (NEP)</b>	
<b><u>2nd Semester Minor: Paper 2A (Theory): BT 102M</u></b> <ul style="list-style-type: none"><li>▪ <b>Unit I:</b> <i>Riccia</i> and <i>Marchantia</i>: External &amp; internal structure: sporophytic &amp; gametophytic structure and life cycle.</li><li>▪ <b>Unit II:</b> General Characters of pteridophytes: Type genus- <i>Lycopodium</i>.</li><li>▪ <b>Unit III:</b> <i>Cycas</i> sp. -Life Cycle (Morphology, Anatomy, Reproduction).</li></ul>	<b><u>2nd Semester Minor: Paper 2B (Practical): BT 102M</u></b> <ul style="list-style-type: none"><li>▪ Workout- <i>Pteris</i> sp. &amp; <i>Selaginella</i> sp.</li><li>▪ Identification.</li><li>▪ Practical Note Book Submission.</li></ul>



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<ul style="list-style-type: none"><li>▪ <b>Unit IV:</b> Definition of fossil, Conditions required for fossilisation, fossilisation process, Types of fossil (Body fossil- Micro- and Mega-fossils, Trace fossil, Chemical fossil, Index fossil.</li></ul>	
<b>4th Semester (Honours)</b>	
<b>4th Semester (Honours) - Theory</b> <ul style="list-style-type: none"><li>❖ <b>Unit I:</b> Inflorescence, adhesion cohesion flower types, Fruit, Micro and megasporogenesis, Micro and mega gametogenesis, Endosperm Development, Embryo Development.</li><li>❖ <b>Unit II:</b> Meristematic and Permanent tissue, Habitat and Niche, Ecological Succession, Vegetation of Tripura.</li></ul>	<b>4th Semester (Honours) - Practical</b> <ul style="list-style-type: none"><li>❖ Identification- Different forms of Placentation &amp; Fruits.</li><li>❖ Practical Note Book Submission.</li></ul>
<b>4th Semester (General)</b>	
<b>4th Semester (General) – Theory</b> <ul style="list-style-type: none"><li>❖ <b>Unit I:</b> Inflorescence, adhesion cohesion flower types, Fruit</li><li>❖ <b>Unit II:</b> Meristematic and Permanent Tissue, Habitat and Niche, Ecological Succession, Vegetation of Tripura.</li></ul>	<b>4th Semester (General) - Practical</b> <ul style="list-style-type: none"><li>❖ Identification- Different forms of Placentation &amp; Fruits.</li><li>❖ Practical Note Book Submission.</li></ul>
<b>6th Semester (Honours)</b>	
<b>6th Semester (Honours) – Theory</b> <ul style="list-style-type: none"><li>• <b>Unit I:</b> Protein &amp; Lipid.</li><li>• <b>Unit II:</b> Photosynthesis.</li><li>• <b>Unit III:</b> Classification of crude drug, Importance of Pharmacognosy, Alkaloids.</li><li>• <b>Unit IV:</b> Totipotency, Callus Culture.</li></ul>	<b>6th Semester (Honours) - Practical</b> <ul style="list-style-type: none"><li>• All Plant Physiology Experiments.</li><li>• Biochemistry.</li><li>• Practical Note Book Submission.</li></ul>

*DR*  
06/05/2024

HoD, Department of Botany  
Holy Cross College  
Agartala



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### NOTICE

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Date: 09.05.2024

This is to inform all the students that the Department of Botany, Holy Cross College, Agartala is going to conduct a Class Test as a part of Internal Examination for 2<sup>nd</sup> (NEP), 4<sup>th</sup> and 6<sup>th</sup> Semester (Major, Minor, Honours, General) students during the 3<sup>rd</sup> and 4<sup>th</sup> week of May, 2024. All are hereby instructed to be present on the exam days to appear in the internal examination.

*Dr. Debasree Lodh*  
09/05/2024

Dr. Debasree Lodh  
Head, Department of Botany  
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