2.2.1 The institution assesses the learning levels of the students and organizes special Programmes for advanced learners and slow learners

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Policy On Slow Learners and Advanced Learners

1. Introduction

Every year students from diverse academic, economic, social and family background are enrolled to the BSc Chemistry Honours Programme and BSc Regular (without honours) programme. Consequently, learning capacity of the students in a particular batch also vary. Some of them are very bright, attentive, hardworking, focussed while a large section of them has low understanding capacity, lack attitude, poor prerequisite knowledge on the subject, irregular, etc. In spite of their diverse capabilities and learning levels, we have been employing a common teaching and learning strategy for all. We feel that both slow learners and the advanced learners deserves special attention in addition to the common strategies we employ. From the academic session 2020-21, we have decided to identify the slow learners and advanced learners in a batch of honours programme and arrange special activities for them according to their need. We have avoided deciding the same in case of students taking Generic Elective (GE) or Regular Courses as the number of students in those courses are too high to manage.

2. Procedure for assessing the learning levels of the students

- Slow learners and advanced learners to be identified batch wise manner starting from the first semester of a batch.
- Assessment of learning levels to be done on the basis of following criteria:

Sl No	Criteria	Weightage (%)
1	Marks obtained in Core Courses (HC) in the First semester sessional examination	50
2	Marks obtained in Core Courses (HC) in the First semester external examination	25
3	Teacher's observation in class-room and during mentoring sessions	25

- For the criterion 3, all the teachers teaching courses will rate each student on a scale of 1 to 10.

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- Students scoring below 40 on the scale of 100 to be treated as slow learners and those scoring above 70 to be treated as advanced learners.
- The process of identification of the learners to be started just after the declaration of result of first semester external examination conducted by the parent university.
- The list of slow and advanced learners to be finalised in a meeting of all the teachers chaired by the Head of the Department.
- Modification in the list may be made following the progress of the learners in the semesters to follow. i.e., Sem II, Sem III, Sem IV, Sem V, Sem VI.

3. Activities to be arranged for slow learners

- Remedial class
- Tutorial class
- Counselling through Mentoring programme
- Concerned teachers to help slow learners solve previous year question papers.
- Anonymous query box: Slow learners usually hesitate to ask questions openly in the class in spite of having doubts about many things. Such learners may feel it comfortable to put their questions in such a query box. Questions put by the students anonymously are to be addressed by the concerned teachers in the class.

4. Activities to be arranged for advanced learners

- Encouragement to present seminar on advanced topic
- To assign advanced problems for project work.
- To Assign hard problems as assignment
- To contribute to departmental monthly publication "Molecule of the Month".
- To guide and motivate to appear in national level entrance such as JAM, central university entrance, etc.
- To train them in chemical drawing software like ChemSketch, computational software like Gaussian, etc.
- To establish MoU with institute of repute like IITG, Tezpur University for giving advanced learners opportunity to work in the research lab of such institute during their project work.

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5. Performance improvement note

- Mentor teachers assigned to the slow learners and the advanced learners to monitor the progress of the learners individually and make summary notes in their respective mentoring registers.
- Head of the department to verify such records from time to time.

6. Record keeping

Following documents are to be maintained:

- To maintain a report of assessment of learning levels of the students based on the criteria mentioned elsewhere in this document.
- To maintain separate list of slow and advanced learners.
- To maintain records of attendance of learners and other aspects of remedial classes and tutorial classes in remedial class register and tutorial class register.
- Records of contribution to the Molecule of the Month.
- To maintain records of all supports, assignments, tasks and training imparted to the learners.

Finalised in the Departmental Meeting held on 10.03.2020

Signature of the faculty members:

1. Dr Dipanjali Pathak
2. Dr Sanjib Deuri, HoD
3. Dr Hitesh Das
4. Abdur Rezzak Ali
5. Dr Nibedita Gogoi
6. Dr Sameeran Kumar Das
7. Dr Rashmi Jyoti Das

Head, Department of Chemistry
M.C. College, Barpeta

Approved by

Dr Prakash Sarma, Principal

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Internal Quality Assurance Cell,
M.C. College, Barpeta (Assam).

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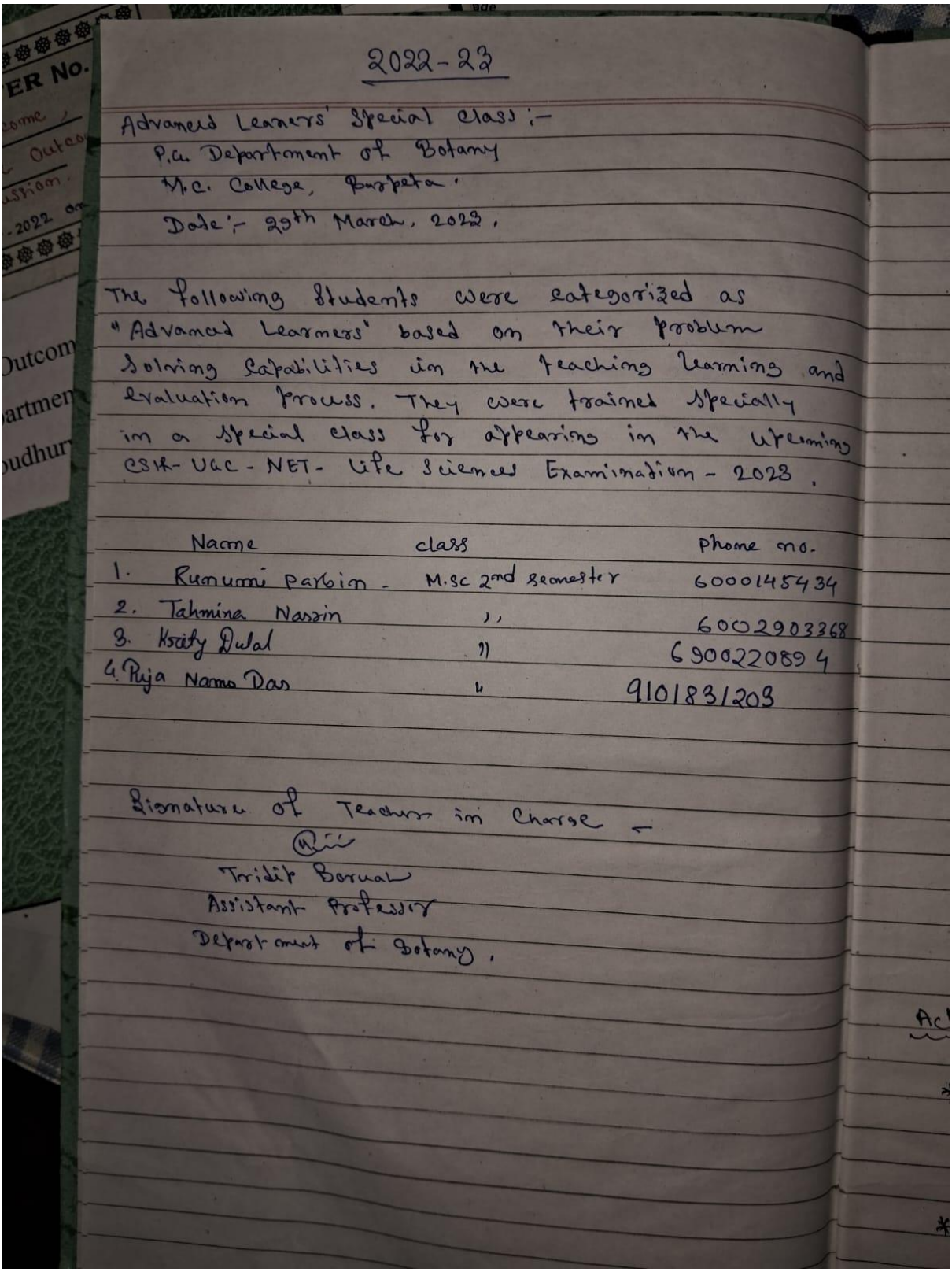
Advanced Learners Special Class



2022-23

Advanced Learners' Special class :-
P.G. Department of Botany
M.C. College, Barpeta.
Date :- 29th March, 2022.

The following students were categorized as "Advanced Learners" based on their problem Solving Capabilities in the teaching learning and evaluation process. They were trained specially in a special class for appearing in the upcoming CSIR-UGC-NET- Life Sciences Examination - 2023.

	Name	class	phone no.
1.	Runumi Parbin	M.Sc 2nd semester	6000145434
2.	Tahmina Nasrin	"	6002903368
3.	Kraity Dulal	"	6900220894
4.	Puja Nama Das	"	9101831203

Signature of Teacher in Charge -

Tridib Boruah
Assistant Professor
Department of Botany.

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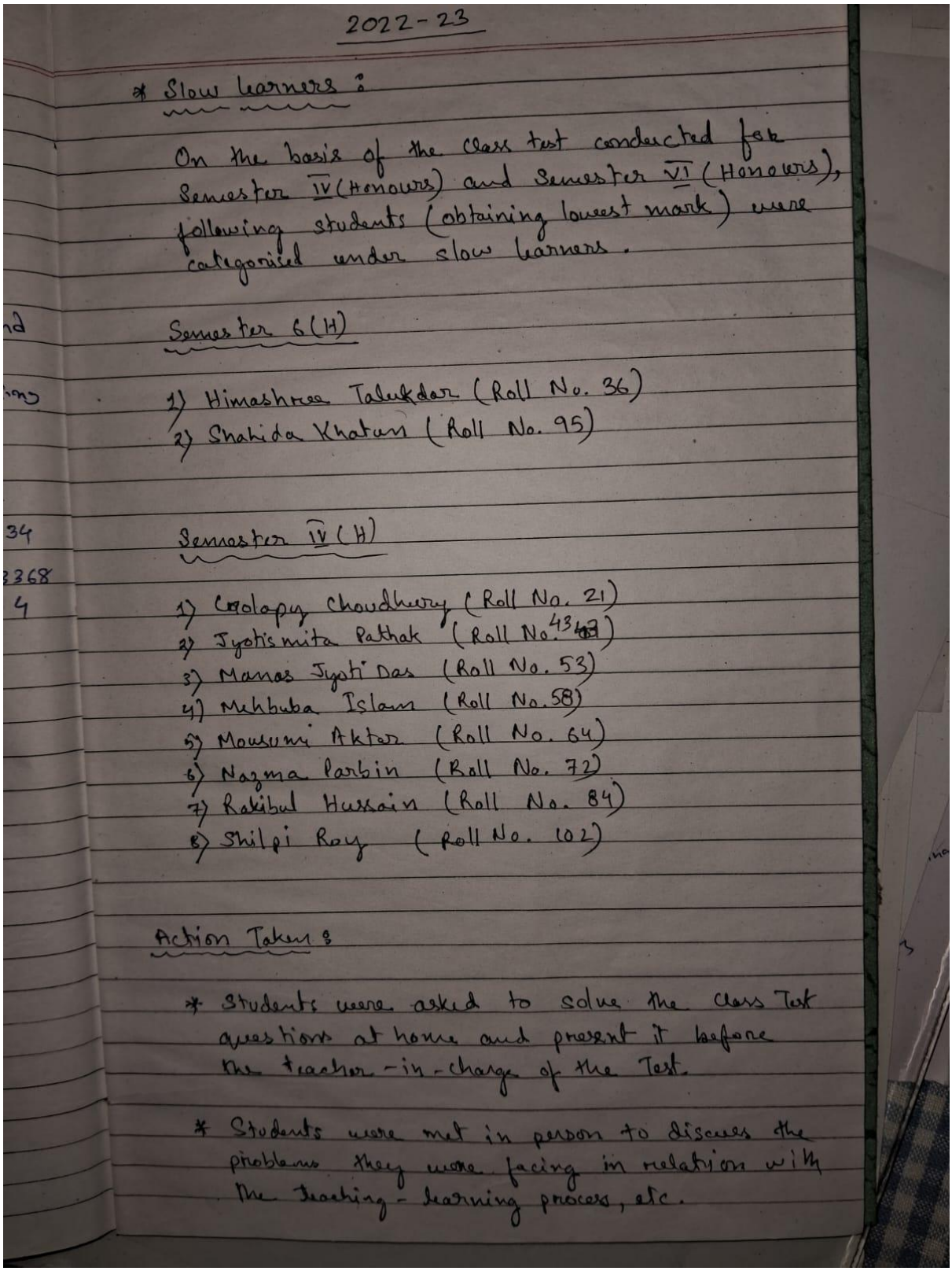
Identification of Slow Learners



2022-23

* Slow learners :

On the basis of the class test conducted for Semester IV (Honours) and Semester VI (Honours), following students (obtaining lowest mark) were categorised under slow learners.

Semester 6 (H)

1) Himashree Talukdar (Roll No. 36)
2) Shahida Khatun (Roll No. 95)

Semester IV (H)

1) Cholapy Choudhury (Roll No. 21)
2) Jyotismita Pathak (Roll No. 43)
3) Manas Jyoti Das (Roll No. 53)
4) Mehbuba Islam (Roll No. 58)
5) Mousumi Akter (Roll No. 64)
6) Nazma Parbin (Roll No. 72)
7) Rakibul Hussain (Roll No. 84)
8) Shilpi Roy (Roll No. 102)

Action Taken :

* Students were asked to solve the class Test questions at home and present it before the teacher-in-charge of the Test.

* Students were met in person to discuss the problems they were facing in relation with the teaching-learning process, etc.

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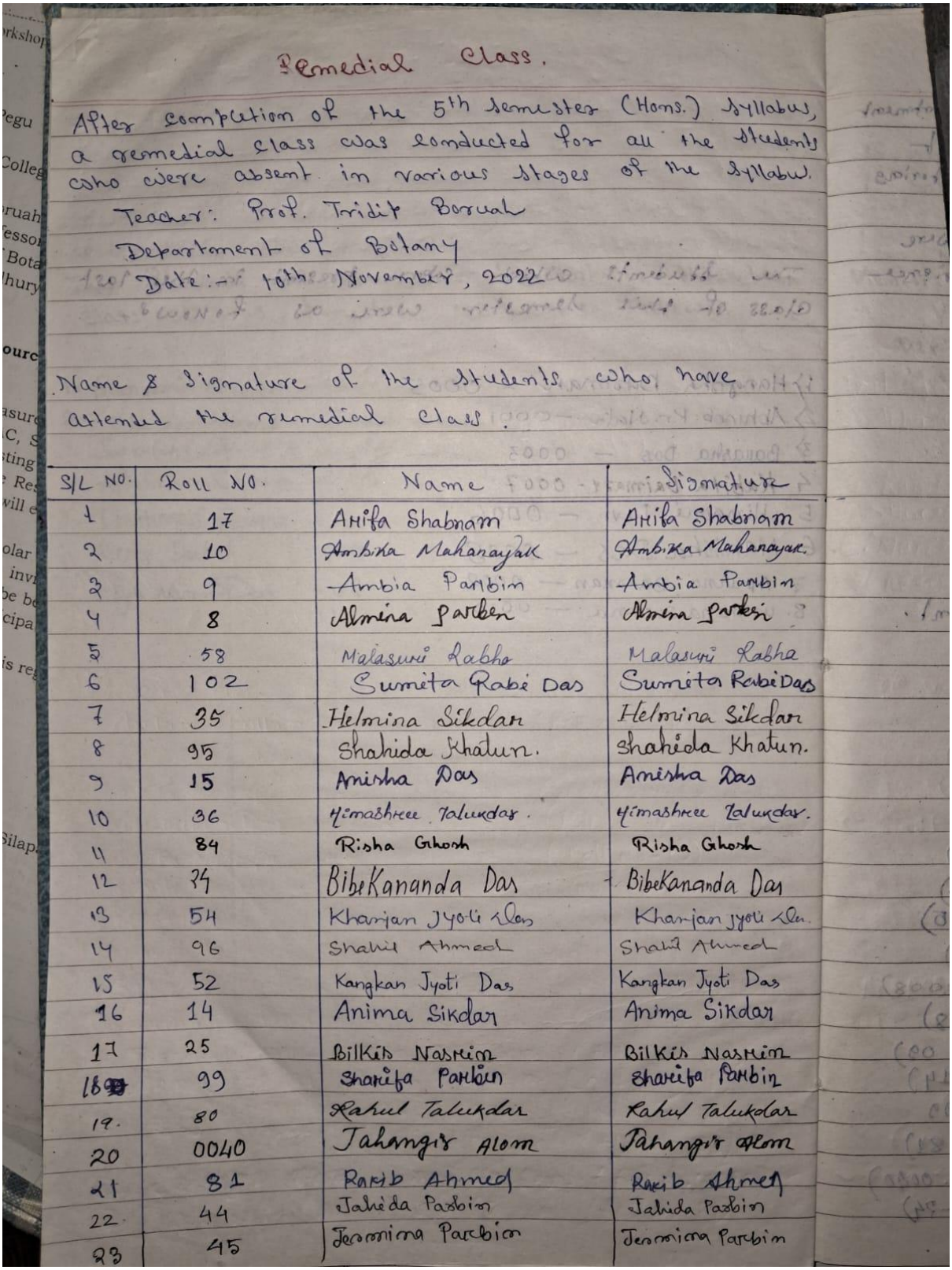
Remedial Class



Remedial Class.

After completion of the 5th semester (Hons.) syllabus, a remedial class was conducted for all the students who were absent in various stages of the syllabus.

Teacher: Prof. Tridit Boruah
Department of Botany
Date:- 10th November, 2022

Name & Signature of the students who have attended the remedial class.

S/L NO.	Roll NO.	Name	Signature
1	17	Anifa Shabnam	Anifa Shabnam
2	10	Ambika Mahanayak	Ambika Mahanayak
3	9	Ambia Parbin	Ambia Parbin
4	8	Almina Parbin	Almina Parbin
5	58	Malasuri Labha	Malasuri Labha
6	102	Sumita Rabi Das	Sumita Rabi Das
7	35	Helmina Sikdar	Helmina Sikdar
8	95	Shahida Khatun.	Shahida Khatun.
9	15	Anisha Das	Anisha Das
10	36	Himashree Talukdar.	Himashree Talukdar.
11	84	Risha Ghosh	Risha Ghosh
12	34	BibeKananda Das	BibeKananda Das
13	54	Khanjan Jyoti Das	Khanjan Jyoti Das.
14	96	Shahil Ahmed	Shahil Ahmed
15	52	Kangkan Jyoti Das	Kangkan Jyoti Das
16	14	Anima Sikdar	Anima Sikdar
17	25	Bilkis Nasrin	Bilkis Nasrin
18	99	Shariffa Parbin	Shariffa Parbin
19.	80	Rahul Talukdar	Rahul Talukdar
20	0040	Jahangir Alom	Jahangir Alom
21	81	Rakib Ahmed	Rakib Ahmed
22.	44	Jahida Parbin	Jahida Parbin
23	45	Jesmina Parbin	Jesmina Parbin

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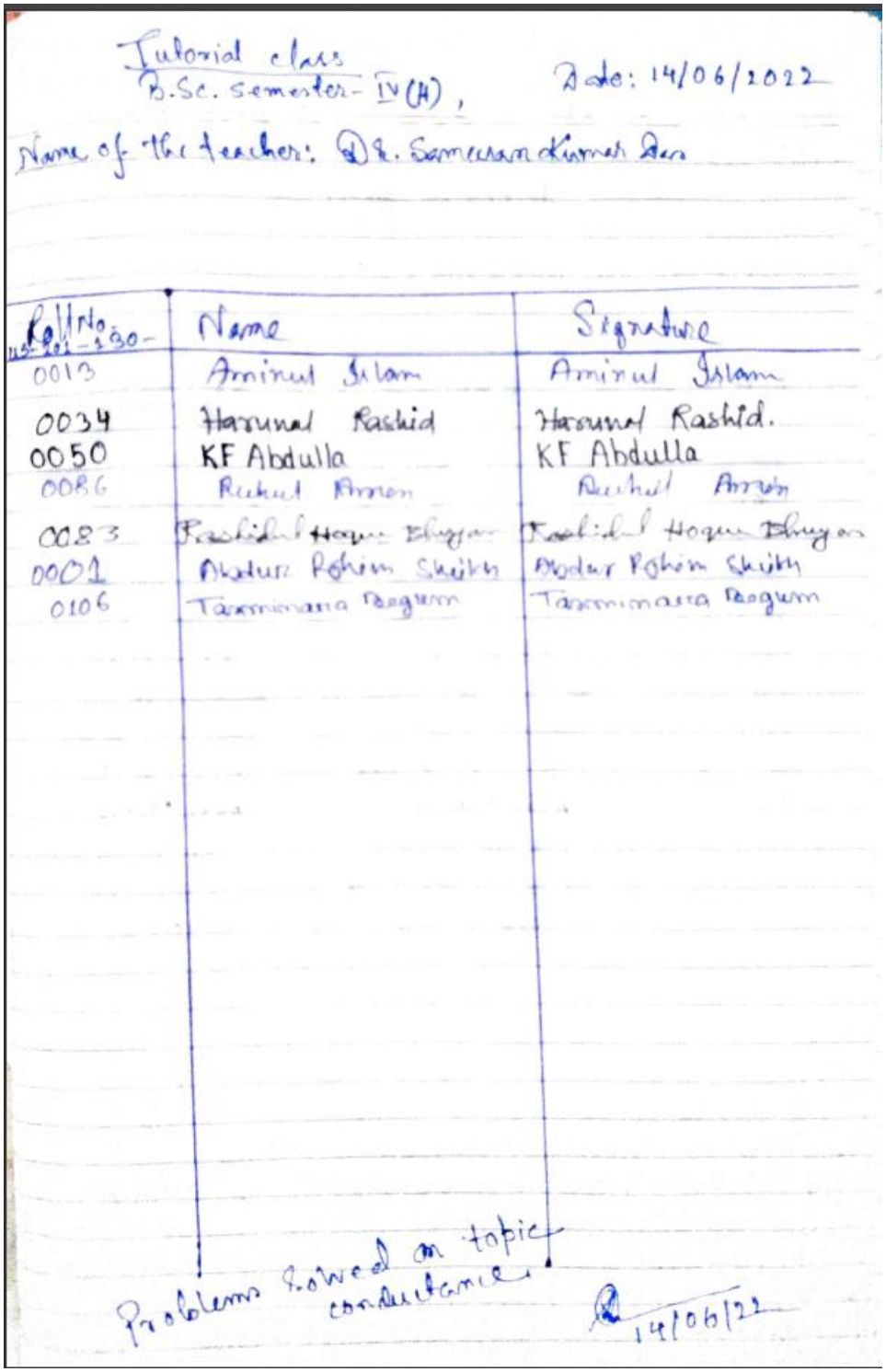
Tutorial class



Tutorial class
B.Sc. Semester- IV (H),
Date: 14/06/2022

Name of the teacher: Dr. Samiran Kumar Das

Roll No. 001-030	Name	Signature
0013	Aminul Islam	Aminul Islam
0034	Harunal Rashid	Harunal Rashid.
0050	KF Abdulla	KF Abdulla
0086	Rakibul Hasan	Rakibul Hasan
0083	Rashidul Hoque Bhuyan	Rashidul Hoque Bhuyan
0001	Abdur Rohim Sheikh	Abdur Rohim Sheikh
0106	Tasmimara Begum	Tasmimara Begum

Problems solved on topic conductance.

14/06/22

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Anonymous query box

Anonymous Query Box questions discussion

Date: 01/07/2022
Time: 12:00 – 1.PM
Class: Semester IV Honours.

The following questions dropped by someone in the query box were discussed.

Q. Transition metals are good catalyst and describe its action of mechanism.

Q. Higher oxidation states usually becomes more common for 4d and 5d series of transition elements compared to 3d series. Give reasons.

Sanjit Dutta
1/7/2022

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Seminar presentation by Student

Students' Seminare
30.08.2022
Class: 4th Semester Honours

Name of the presenters with topic

1. Adil Ahmed - Representative antipyratic analgesic anti-inflammatory (Asprin, Paracetamol, Ibuprofen.
2. Mayuri Barman - Antibiotic (Chloramphenicol), Antibacterial and Antifungal.
3. Mubarak Ali - Antiviral (acyclovir), HIV-AIDS related drug (AZT-Zidovudine)
4. Sundar Jyoti Ojah. - Could not present due to Physics exam.
5. Tarangini Barman - Cardiovascular and Antidysentry drugs.

Signature of the students and teachers present:

1. Abdur Rezzak Ali
2. Dr Rashmi Jyoti Das.
3. Sanjib Deuri
4. Sameera Kumar Das

Students present:

1. Shamima Shabnam
2. Surajana Das
3. Sonalika Ghosh
4. Majoni Parbin
5. Rupamani Begum
6. Asma Khatun
7. Shehanaz Khanam
8. Sowjanya Das.
9. Nasira Khatun
15. Abdur Rohim Sheikh
16. Jubain Hassan.
17. Harunal Rashid.
18. Ruhul Amin
19. mayuri Barman
20. KF Abdulla
21. Aminul Islam
22. Tasminara Begum.
23. Nayan Jyoti Das
24. Rashidul Hoque Bhuyan

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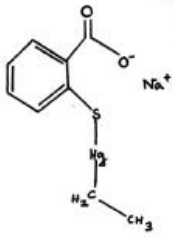
Poster Prepared by Advanced Learners

MOLECULE OF THE MONTH : FEB 2022

Thiomersal



"The molecule that prevents vaccines from going stale."

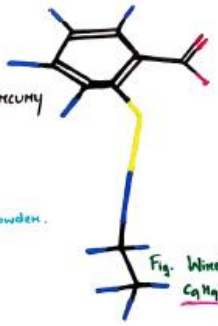


Fig. Wire frame model of $C_9H_9HgNaO_2S$

Introduction → Thiomersal (INN), or thimerosal (USAN, JAN) is a organomercury compound. This compound is a well-established antiseptic and antifungal agent.

IUPAC Name → Ethyl(2-mercaptobenzoato-(2-)-O,S)mercurate(1-) sodium

Other Name → Mercury((o-carboxyphenyl)thio)ethyl sodium salt

Chemical formula → $C_9H_9HgNaO_2S$ **Appearance →** White or slightly yellow powder.

Molar mass → 404.81 g/mol

Density → 2.508 g/cm³

Melting point → 232 to 233 °C (450 to 451 °F, 505 to 506 K) (decomposition)

Solubility in water → 1000 g/l (20 °C)

History → (Where does it get its name from?) Morris Khanarch, a chemist then at the University of Maryland filed at patent application for thiomersal in 1927; Eli Lilly later marketed the compound under the trade name Merthiolate. In vitro tests conducted by Lilly investigators H.M. Powell and W.A. Jamieson found that it was forty to fifty times as effective as phenol against Staphylococcus aureus. It was used to kill bacteria and prevent contamination in antiseptic ointments, creams, jellies, and sprays used by consumers and in hospitals, including nasal sprays, eye drops, contact lens solutions, immunoglobuline, and vaccines. Thiomersal was used as a preservative (bactericide) so that multidose vials of vaccines could be used instead of single-dose vials, which are more expensive. By 1938, Lilly's assistant director of research listed thiomersal as one of the five most important drugs ever developed by the company.

Uses → Mercury compounds have long been used medicinally. Mercury chloride was for many years used to treat syphilis, though its harmful effects outweighted any benefits. Mercury oxide was for many years (atleast until the 1970s) used in medications like Golden Eye Ointment. Thiomersal's role has been suggested that $CH_3CH_2Hg^+$ ion is the active species.

Preparation :→ The standard method seems to be that employed by Khanarch, reaction between ethylmercury-chloride, aqueous sodium hydroxide and thiosalicylic acid.

Importance :→ Vaccination was invented by Edward Jenner, who in 1796 used cowpox to create immunity to small pox. Pasteur came up with a rabies vaccine in 1885, and in the coming years vaccines were developed against more and more diseases, such as diphtheria, tetanus, anthrax, cholera and typhoid. Effective though they were a problem confronting practitioners of early 20th century child immunisation was bacterial contamination of vaccines. In the most adverse number of cases in 1928, 12 out of 21 children inoculated with contaminated diphtheria vaccine died of multiple staphylococcal abscesses and toxaemia in Queensland, Australia.

Whilst no preservative is needed for a single-dose vaccine, multidose sample usually have a rubber cap through which doses are withdrawn, and there is the possibility of bacterial contamination when a syringe needle is inserted.

Thiomersal is a organic mercury compound that is metabolized to a low molecular weight compound (the ethylmercury kation) which is an excellent inhibitor of many enzymes. It works against nearly everything, but not against bacterial endospores, in the microgram per ml range. It is somewhat outfashioned, due to the heavy metal character of the compound.

Prepared By - Subarna Gayan (TDC 1st Sem)

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Peer Teaching

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Special Class & Book Recommendation for Advanced Learners

Special class for Advanced learner

Date: 10.08.22

Few of the outgoing students of the Dept of Botany wanted some entrace exam related guidance for their upcoming University Entrance examination. They were being guided by Prof. Tridib Biswas

Signature of the students.

1. Tahmina Nasrin, B.Sc. 6th Sem (US-191-130-0106
2. Rumumi Parbin, B.Sc 6th Sem (US-191-130-0087

Books recommended for Advanced and Slow Learners.

Date: 17.08.22

Sl No.	Name of the book	Class	Roll No.	Name & Signature of Student
1.	Biomolecules (S. Yadav)	1B.Sc 1st sem	228	Ajmina Khanam
2.	Biomolecules (A. Sahu)	B.Sc 1st sem(H)	168	Maidul Islam
3.				

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