NETAJI NAGAR DAY COLLEGE

2021-2022

1.1.2 SUPPORTING DOCUMENTS

NOTICES

2021-2022

NETAJI NAGAR DAY COLLEGE

(Under Graduate & Post Graduate Institution)
Affiliated to University of Calcutta
Accredited by NAAC (B^{++})
170/436, N.S.C. BOSE ROAD
REGENT ESTATE – KOLKATA - 700092

Ref. No..... ***Date 8th July 2021***

NOTICE FOR B.A./B.Sc/B.COM PART III

Students eligible to appear in B.A./B.Sc. / B.Com. Part III (1+1+1) Examination 2021 of the University of Calcutta, are hereby informed to pay the College enrolment Fee of Rs. 200/- (Rupees Two Hundred only) by online mode through any payment gateway to the Bank A/C of the College given below, and mention student name, course, and part III.

Beneficiary Name: Netaji Nagar Day College
Bank Name: Central Bank of India
Bank Branch: Regent Park, Kolkata -700040
Bank A/C No.: 1034484756
IFSC: CBIN0281075

Students are also informed to submit online application Form for appearing in the B.A./B.Sc./B.Com. Part III (1+1+1) Examination 2021 of the University of Calcutta through the website cuexam.net or cuexamwindow.in between 12th July and 20th July 2021.

(Dr. Sonali Banerjee Jash)
Principal
Netaji Nagar Day College

Principal
Netaji Nagar Day College
Kolkata - 700 092

NETAJI NAGAR DAY COLLEGE

(Under Graduate & Post Graduate Institution)
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Accredited by NAAC (B^{++})
170/436, N.S.C. BOSE ROAD
REGENT ESTATE – KOLKATA - 700092

Ref. No..... *Date:* 26.12.2021

NOTICE

Department of Mathematics

Time Table for Internal Assessment Examination 2021

	Date	Course	Exam Time	Submission Time Within	Submission mode	Email
Semester-3	04.01.2022	Honours (MTMA)	10:30 am - 12:00 noon	12:30 pm	online	nndcmathematics@gmail.com
		General (MTMG)	3:00pm-3:30pm	3:45pm	online	nndcmathgen@gmail.com
Semester-5	06.01.2022	Honours (MTMA)	10:30 am - 12:00 noon	12:30 pm	online	nndcmathematics@gmail.com
		General (MTMG)	3:00pm-3:30pm	3:45pm	online	nndcmathgen@gmail.com

Ujjwal Kumar Pahari

(Dr. Ujjwal Kumar Pahari)
Head, Department of Mathematics
Netaji Nagar Day College

Netaji Nagar Day College

B.A/ B.Sc **2nd Semester** Internal Assessment , 2021

(Generic Elective)

Date	Time	Subject
20/07/2021	10:00 am.-12:00 noon	Pol. Science, Physics, Zoology
	2:00 pm.-4:00 pm	History, Philosophy, Botany, Computer Science.
23/07/2021	10:00 am.-12:00 noon	Education, Electronics, Economics, Chemistry
	2:00 pm.-4:00 pm	Mathematics, Physiology, Geography,
24/07/2021	12:00 noon-2:00pm	AECC- II (ENVS) All Students

s/d Principal, Netaji Nagar Day College

Netaji Nagar Day College

B.A/ B.Sc **4th Semester** Internal Assessment, 2021

(Generic Elective)

Date	Time	Subject
19/07/2021	10:00 am-12:00 noon	Pol. Science, Physics, Zoology
	2:00 pm-4:00pm	History, Philosophy, Botany, Computer Science.
22/07/2021	10:00 am-12:00 noon	Mathematics, Physiology, Geography,
	2:00 pm-4:00pm	Education, Electronics, Economics, Chemistry
24/07/2021	10:00 am-12:00 noon	LCC-2
	2:00 pm.-4:00 pm	SEC (Related Subject)

s/d Principal, Netaji Nagar Day College

Netaji Nagar Day College

B.A/ B.Sc **6th Semester** Internal Assessment, 2021

(Generic Elective)

Date	Time	Subject
19/07/2021	10:00 am-12:00 noon	Pol. Science, Physics, Zoology
	2:00 pm-4:00pm	History, Philosophy, Botany, Computer Science.
22/07/2021	10:00 am-12:00 noon	Mathematics, Physiology, Geography,
	2:00 pm-4:00pm	Education, Electronics, Economics, Chemistry
24/07/2021	2:00 pm.-4:00 pm	SEC (Related Subject)

s/d Principal, Netaji Nagar Day College

NETAJI NAGAR DAY COLLEGE

(Under Graduate & Post Graduate Institution)
Affiliated to University of Calcutta
Accredited by NAAC (B^{++})
170/436, N.S.C. BOSE ROAD
REGENT ESTATE – KOLKATA - 700092

Ref. No..... *Date:* **10.07.2021**

Notice for Semester 4

Students of BA/B.Sc./B.Com **Semester 4** are hereby informed to submit online application form through www.cuexam.net or www.cuexamwindow.in for appearing in Semester 4 Examination of 2021 of University of Calcutta, between **12.07.2021** and **19.07.2021**.

They are directed to submit the print copy of the application form submitted online, and the Tuition fee payment receipt to the College office on **15.07.2021** or **23.07.2021** (from 12 noon to 3 pm).

SBJash

Principal
Netaji Nagar Day College

Principal
Netaji Nagar Day College
Kolkata - 700 092

ASSIGNMENTS

2021-2022

SAMPLE DOCUMENTS

Netaji Nagar Day College

Department of Electronics

Class Test of 1st Semester, 2021.

Time: 40 minutes | Full Marks: 20

Answer any two: $10\times2=20$

1.
   a) What is extrinsic semiconductor?
   b) What do you mean by conductivity and mobility of a semiconductor?
   c) What is called transition region in a p – n junction diode?
   d) What is the effect of temp on V – I characteristics of a p – n diode?
   e) Draw the energy band diagram of an n – type extrinsic semiconductor.

2.
a) Explain the difference between metal, semiconductor and insulator using energy band diagram.
b) Write down the Shockley's equation for a p –n junction diode. Draw the energy band diagrams of a p-type and n-type semiconductor.

$[4+(2+2+2)=10]$

3.
a) What do you mean by rectification? Draw the circuit diagram of a full wave rectifier and explain the operation the circuit.
b) What is the PIV of a rectifier circuit?

$[(2+2+4)+2=10]$

Netaji Nagar Day College
B.Sc. Semester III, 2021
Sub: Computational Mathematics Lab
Assignments by: Mitra Tithi Dey
Due date of submission: 18-12-2021

1. Find the root of an equation by Bisection method using C.
2. Find the root of an equation by Newton-Raphson method using C.
3. Write a program in C to find the root of an equation using Regula-Falsi Method.
4. Write a program in C to find the root of an equation using Secant Method.

5. Write a C program to find the integral value of a function by Trapezoidal Rule.

6. Write a C program to find the integral value of a function by Simpson's 1/3rd Rule.

7. Write a program in C to find the desired value of a given function using Newton's Backward Method.

8. Write a program in C to find the desired value of a given function using Newton's Forward Method.

NETAJI NAGAR DAY COLLEGE

B.COM. SEMESTER V 2020

SUB: TAXATION II

Assignments by Dr Satabdee Banerjee

Due date for submission: 15.07.2021

Assignment 1: The following are the particulars of income of Mr. A, who lives at Kanpur:

a) Salary @ Rs 10,000 p.m.

b) Dearness allowance @ 40% of salary

c) City compensatory allowance @ Rs 1,000 p.m.

d) Compensation received for termination of employment under the Industrial Disputes Act from previous employer Rs 35,000.

e) House rent allowance received 4,000 p.m. and he pays rent of Rs 4,800 p.m.

f) He is contributing Rs 1,400 p.m. towards a recognized provident fund. The employer is also contributing the same amount.

g) During the year he paid Rs 1,200 as professional tax.

h) He owns a car which he is using for official purposes. His employer reimburses him Rs 2,000 p.m.

Compute the total income of Mr. A for the assessment year 2021-22.

Assignment 2: Ms. S is appointed in XYZ Pvt. Ltd. in Kolkata on 1.1.2005 on a scale of Rs 4,500 - 100 – 5,300 – 150 – 6,500. From the following particulars compute his income from salary for the previous year 2020-2021:

a) Basic salary – as per scale

b) DA – 100% of first Rs 1,000 of pay plus 50% of the balance

c) Entertainment allowance @ Rs 700 p.m.; expenses incurred Rs 4,000

d) Medical allowance @ Rs 400 p.m.; expenses incurred for medical treatment of his wife Rs 3,500.

e) Bonus Rs 12,500 paid as per contract and Rs 11,500 paid as gratuitous.

f) He is provided with an accommodation in Kolkata for which the employer pays rent of Rs 2,500 p.m. A gardener is also provided by the employer at monthly remuneration of Rs 450.

g) He is allowed to use a car (800 cc) free of cost both for official and private purposes.

h) Electricity expenses of Rs 2,500 and education expenses of Rs 1,500 for the education of his children are reimbursed by the employer.

i) The following deductions are made by the employer from his monthly salary:

   a. Interest-free loan Rs 300 (the employer, however, pays interest of Rs 1,500 to a banker for the same during the year);

   b. Professional tax Rs 110;

   c. Income tax Rs 400;

d. Provident fund (recognized) contribution Rs 600; and
e. House rent Rs 500.

j) The employer contributes Rs 600 p.m. to the recognized provident fund.

k) Interest @ 13% p.a. amounting Rs 7,800 is credited to this fund on 31st March, 2021.

Assignment

Math Hons (Sem 2)

Real Analysis

Answer these questions:

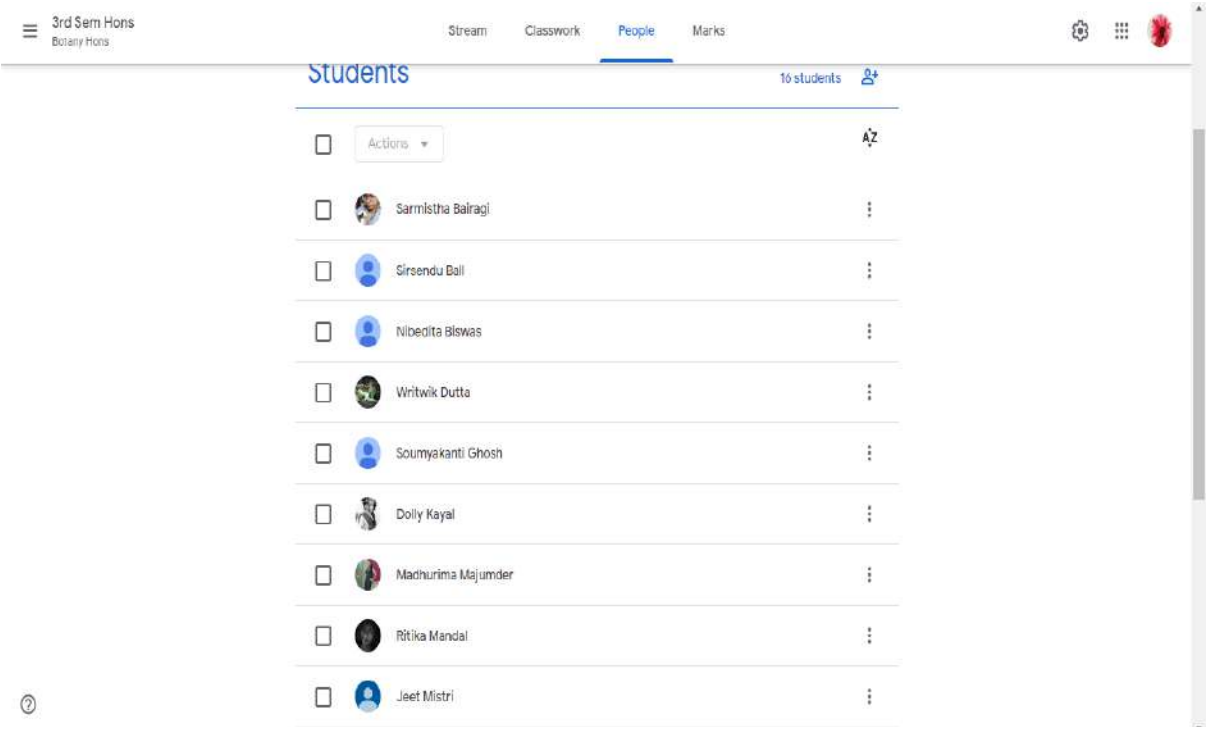
1. Give an example of an unbounded sequence with two subsequences one of which is convergent and other is divergent.

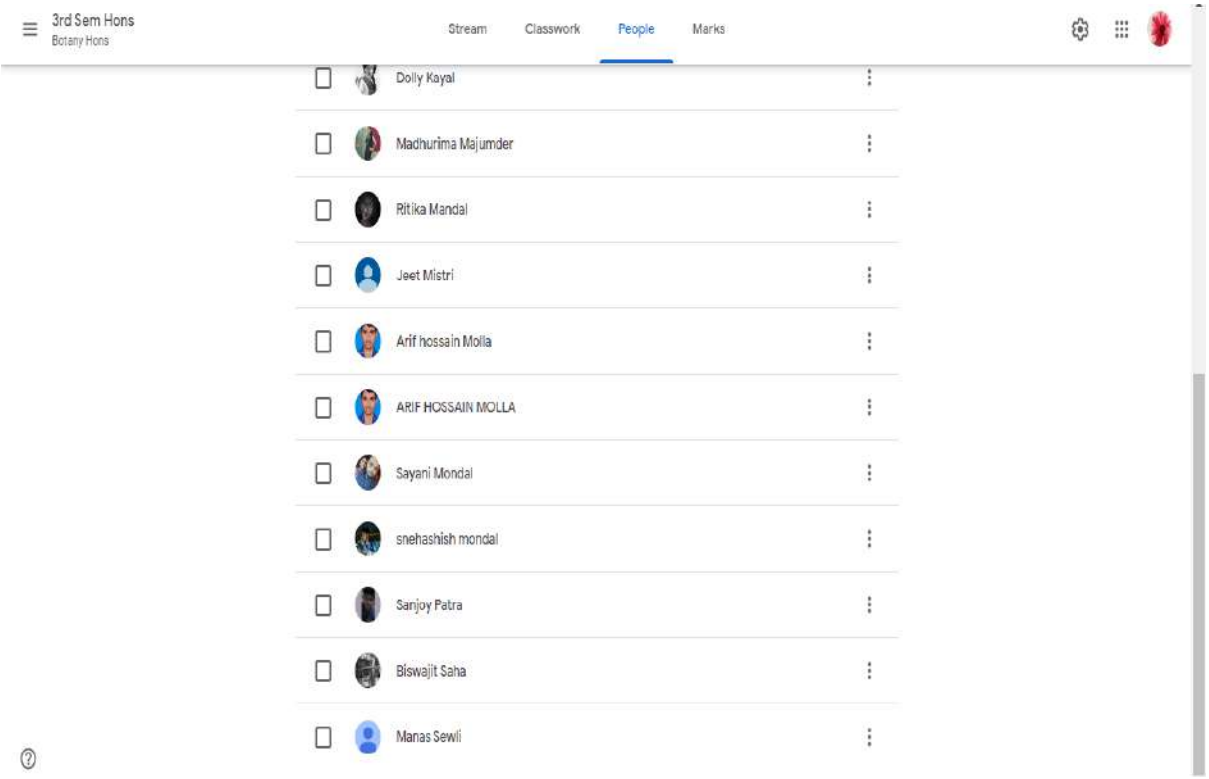
2. Give examples of two non-convergent sequences $\{x_n\}$ and $\{y_n\}$ such that the sequence $\{x_n y_n\}$ is convergent.

3. State the Archimedean Property of R and prove it.
4. If $\lim_{n\to\infty}(b_n - a_n) = 0$, find $\lim_{n\to\infty}\frac{a_n}{b_n}$ where $b_n > 1$ for all n.
5. Justify the statement: "Every interior point of a subset of R is its limit point".
6. Prove that a Cauchy sequence is bounded. Is the converse true? Justify your answer.
7. Prove or disprove: $\lim_{x\to 0}\frac{1}{e^{1/x}+1}$ exists.

Screenshots of Classroom

(Dr. Bhumika Pradhan, Assistant Professor, Dept. of Botany)





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Upcoming
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Announce something to your class

B. Pradhan
22 Jul
These are some of the questions on bryophytes. You all also try to solve questions from book, old question papers etc.

Questions on Bryophyte.p...
PDF

Questions.docx
Word

Add class comment...

B. Pradhan
15 Jul
Refer books also

Class code eoletvp
Subject Plant Biotechnology

Class code
eoletvp

Upcoming
No work due in soon
View all

Announce something to your class

B. Pradhan
21 Jul
Reference notes for Research Methodology paper (2, 4, 6 topic number

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Microtomy.pdf
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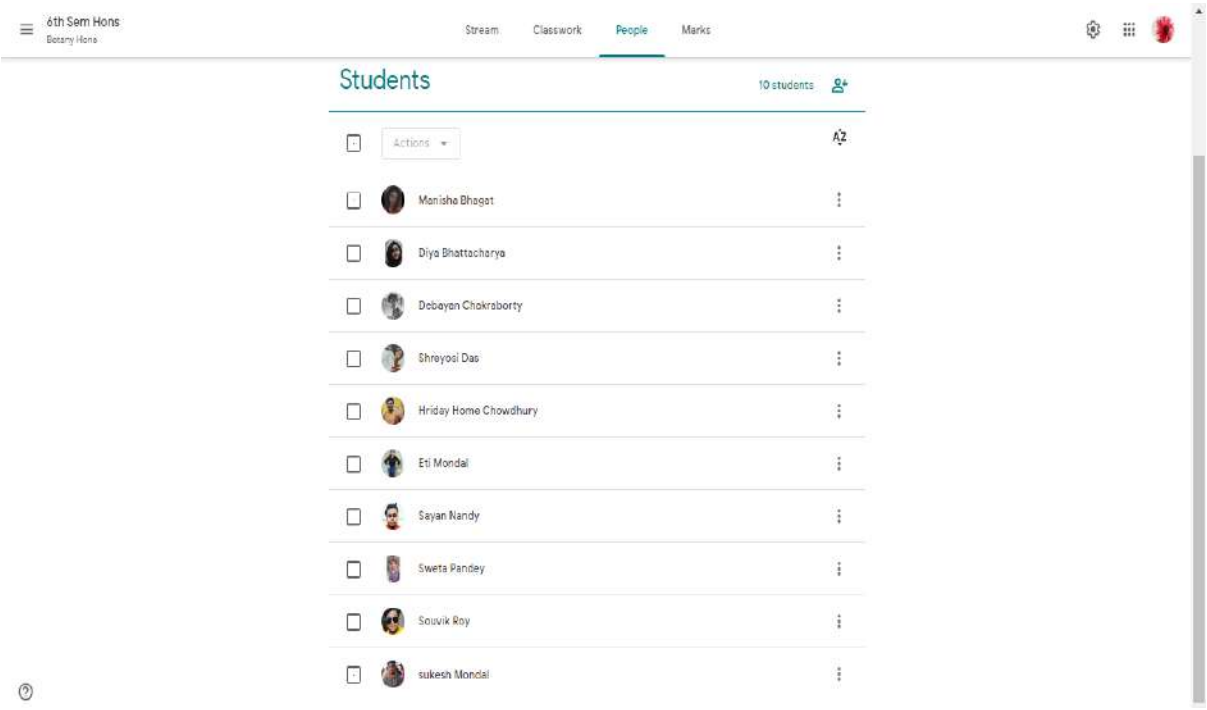
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Hriday Home Chowdhury
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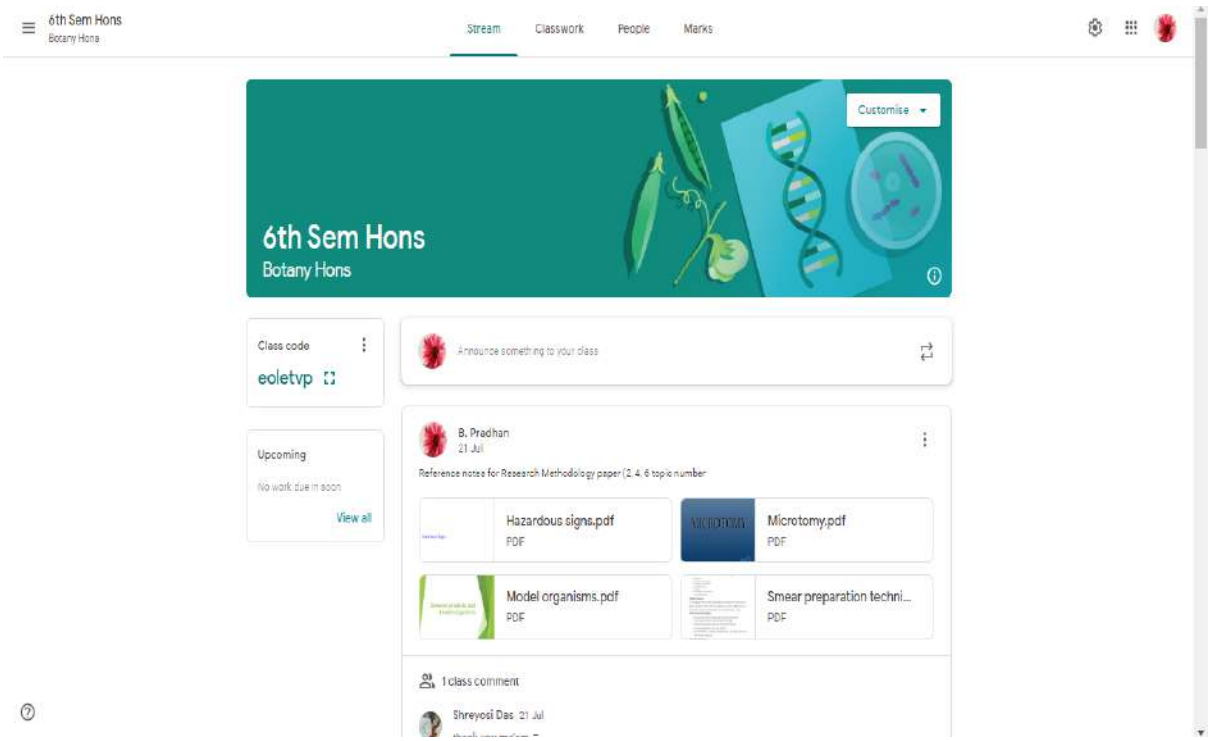
Sayan Nandy
Sweta Pandey
Souvik Roy
sukesh Mondal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21 Jul
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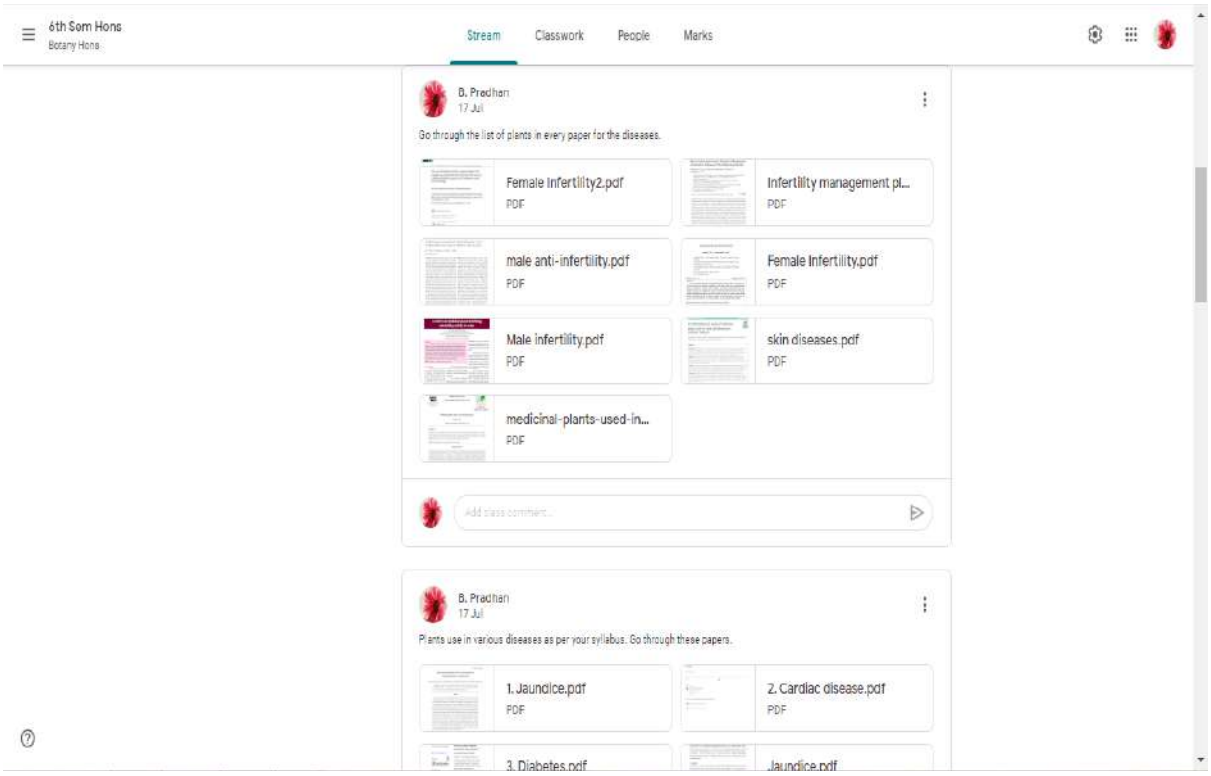
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B. Pradhan
17 Jul
Go through the list of plants in every paper for the diseases.
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B. Pradhan
17 Jul
Plants use in various diseases as per your syllabus. Go through these papers.
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2. Cardiac disease.pdf
PDF
3. Diabetes.pdf
Jaundice.pdf

3rd Sem Hons
Botany Hons

Stream Classwork People Marks

B. Pradhan
9 Jul

Origin of alternation of generations in bryophyte. Unifying characters of archegoniate, bryophyte importance (Plant succession, economic importance etc.). This is for reference purpose, study the books also

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Unifying characters of Arc...
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Bryophytes importance.pdf
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Add class comment...

B. Pradhan
2 Mar

Practical notes

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3rd Sem Hons
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B. Pradhan
2 Mar

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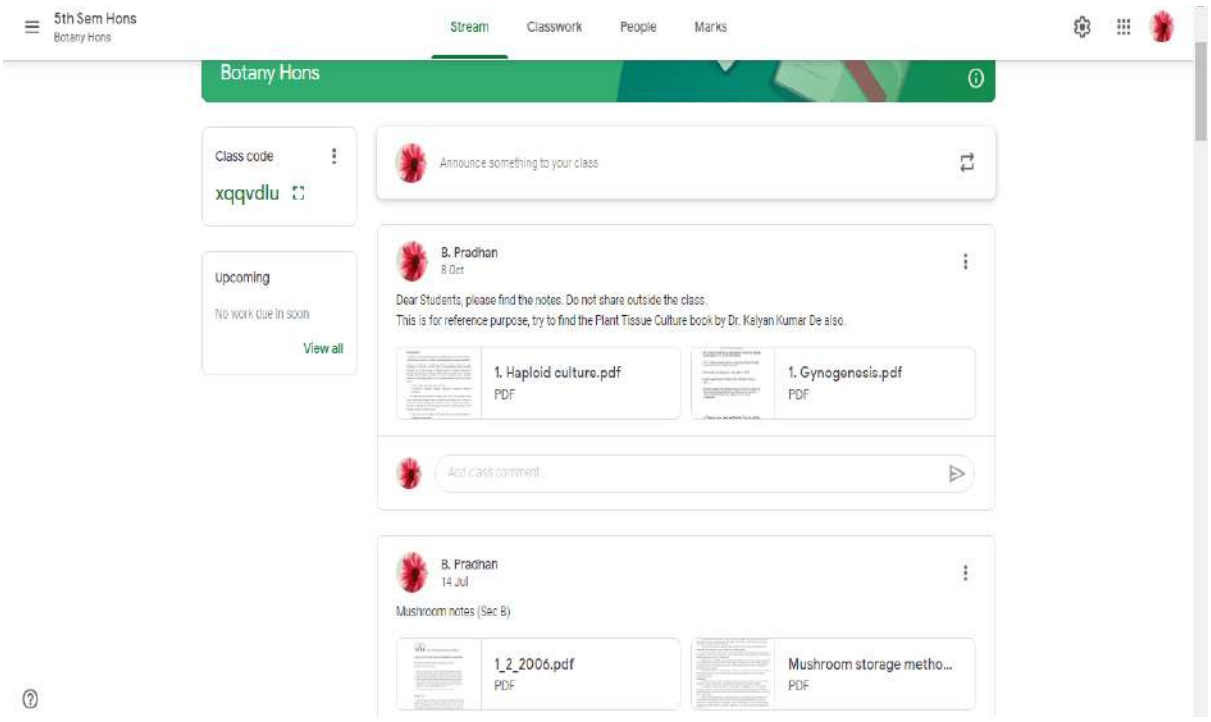
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Announce something to your class
B. Pradhan
8 Oct
Dear Students, please find the notes. Do not share outside the class.
This is for reference purpose, try to find the Plant Tissue Culture book by Dr. Kalyan Kumar De also.
1. Haploid culture.pdf
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1. Gynogenesis.pdf
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B. Pradhan
14 Jul
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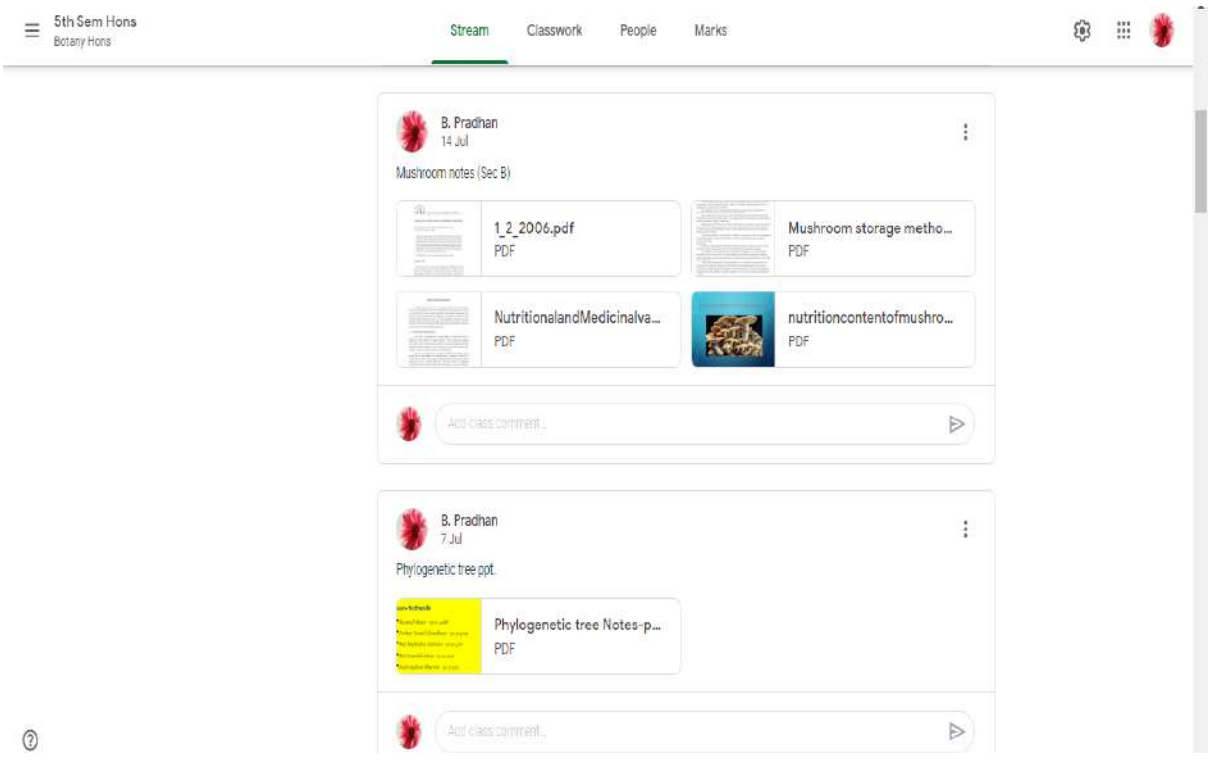
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7 Jul
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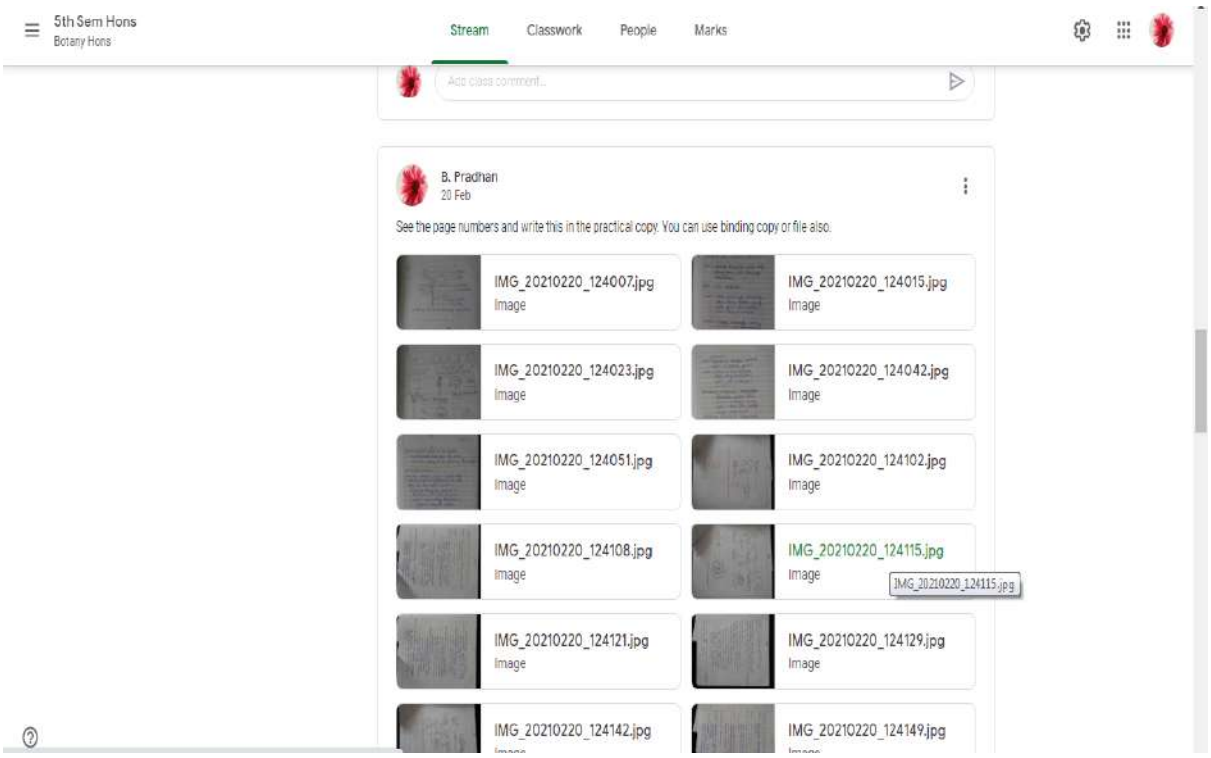
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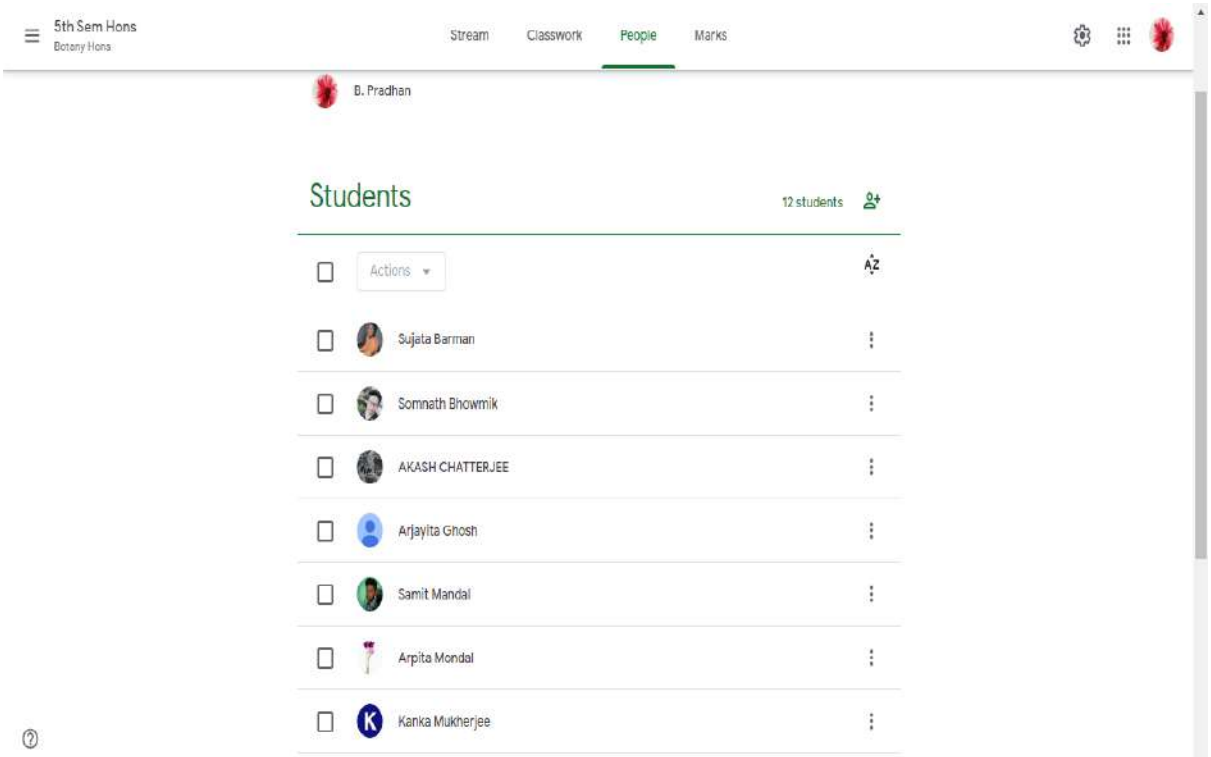
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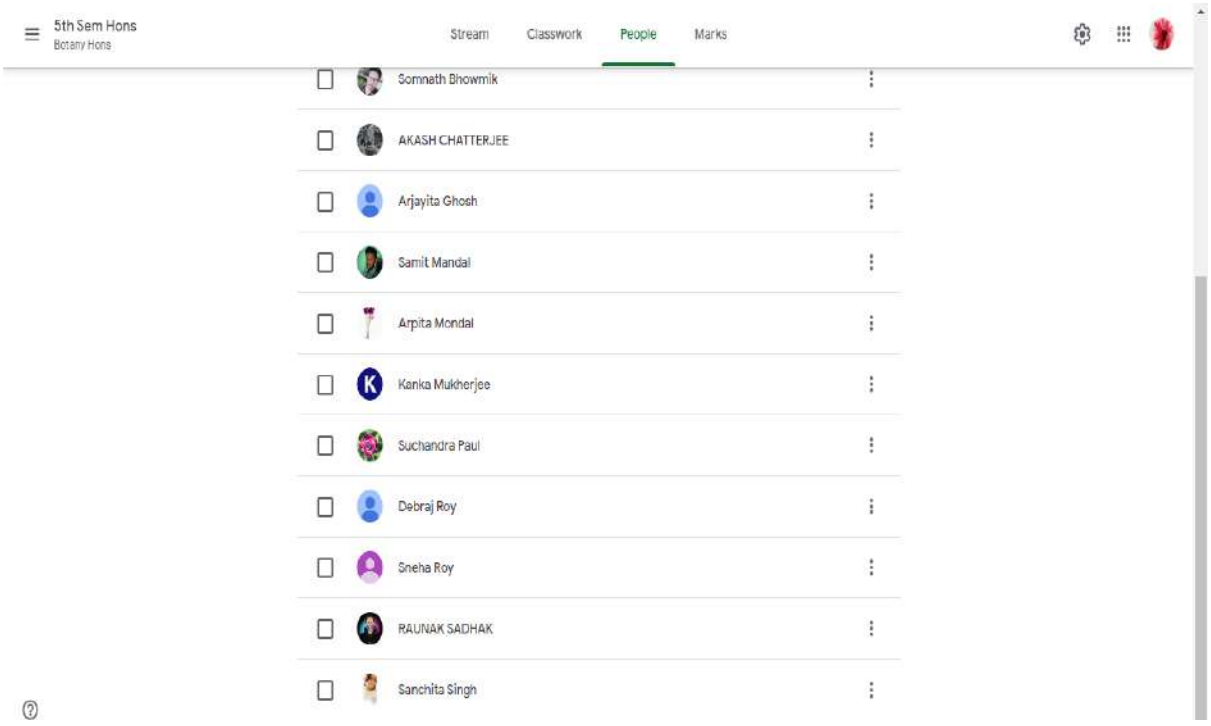
Arpita Mondal
Kanka Mukherjee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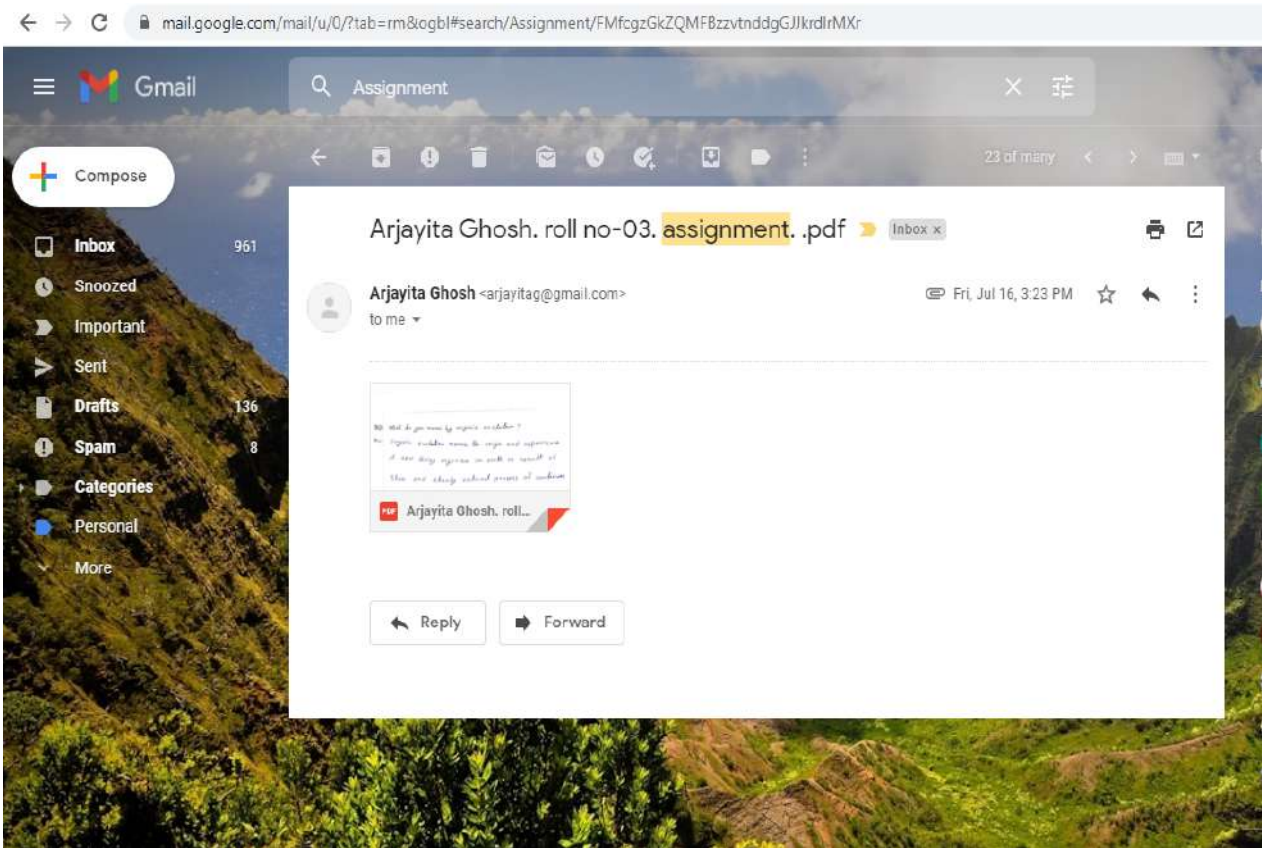
Arpita Mondal
Kanka Mukherjee
Suchandra Paul
Debraj Roy
Sneha Roy
RAUNAK SADHAK
Sanchita Singh

Screenshots of Assignments submission

(Dr. Bhumika Pradhan, Assistant Professor, Dept. of Botany)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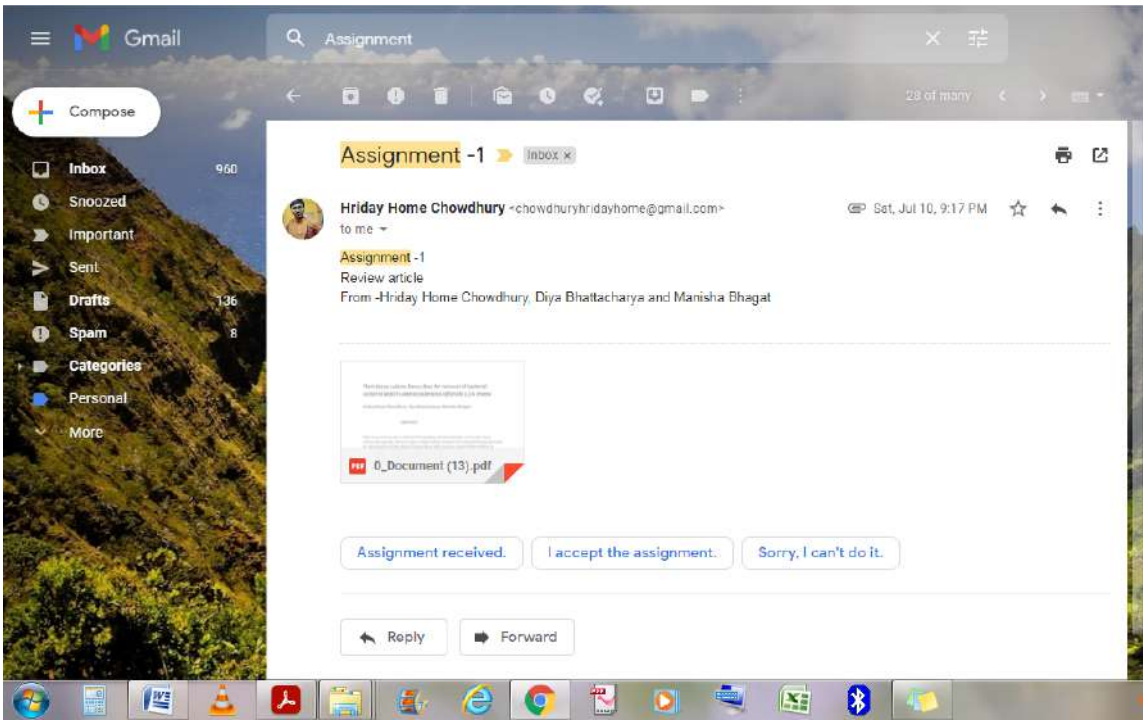
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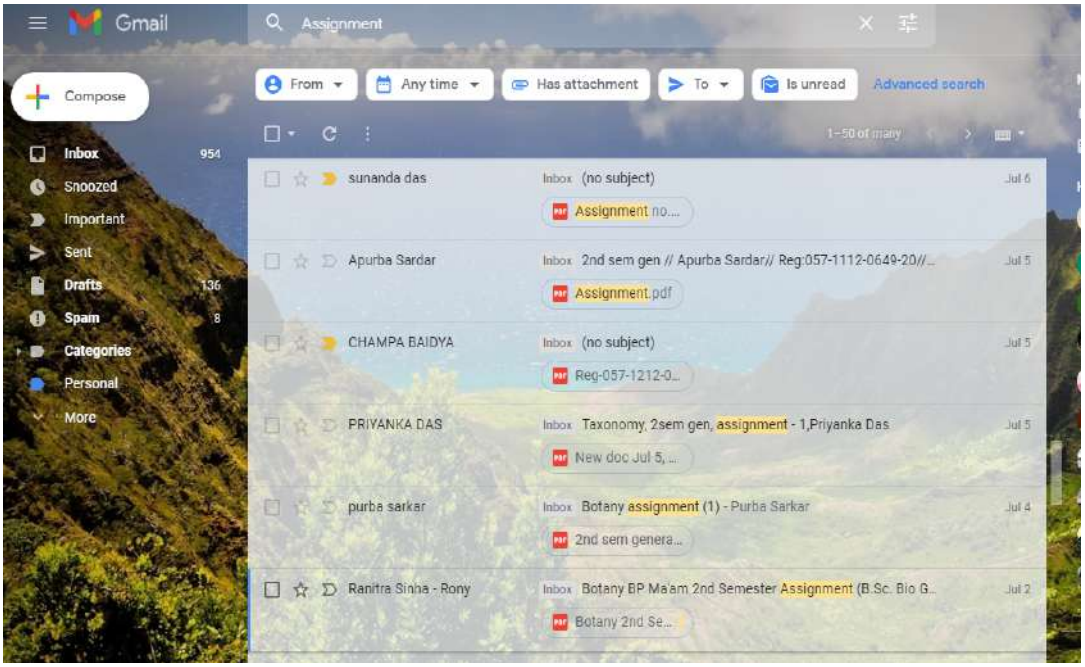
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INTERNAL QUESTIONS

2021-2022

Mid-Term Examination
B.Sc. Part - II Mathematics Honours
Department of Mathematics
Netaji Nagar Day College
Netaji Nagar, Kolkata 92

Full Marks: 80 Time: 3 Hrs.

Module V

(Marks-22)

Modern Algebra II

1. (a) Prove that a cyclic group of prime order has no proper non-trivial subgroup.

Or **2**

If H be a subgroup of a group, show that any two right cosets of H in G have the same Cardinality. **2**

(b) If H be a subgroup of a group G, prove that the relation ρ defined on G by "$a\rho b$ if and only if $a^{-1}b \in H$" for $a, b \in G$ is an equivalence relation on G. **3**

Linear Programming and Game Theory

2. Mr. Sen requires at least 10, 12 and 12 units of chemicals A, B and C for his garden. One jar of liquid product contains 5, 2 and 1 unit of A, B, C respectively. A dry product contains 1, 2 and 4 units of A, B, C per carton. If the liquid product sells for Rs. 3 per jar and the dry product sells for Rs. 2 per carton, pose a liner programming problem to show how many of each should he purchase to minimize the cost and to meet the requirements. **4**

3. (i) Solve graphically the following LPP: **3**

$$\begin{aligned} Max \quad & Z = 2x + 4y \\ sub\ to \quad & x + 2y \leq 5 \\ & x + y \leq 4 \\ & x,\ y \geq 0 \end{aligned}$$

Or

(ii) Solve graphically the following LPP: **3**

$$\begin{aligned} Max \quad & Z = 2x + 3y \\ sub\ to \quad & 3x - y \leq -3 \\ & x - 2y \geq 2 \\ & x,\ y \geq 0 \end{aligned}$$

4. (a) (i) Prove that the set of all feasible solutions of an LPP is a convex set. **3**

(ii) If a given LPP has two feasible solutions x1 and x2 then it has infinite number of feasible solutions. Justify. **2**

Or

(b) (i) Show that all the basic feasible solutions of the following system are degenerate. **3**

$$2x_1 + 6x_2 + 2x_3 + x_4 = 3$$

$$6x_1 + 4x_2 + 4x_3 + 6x_4 = 2$$

(ii) A hyper plane is a convex set. **2**

5. (i) Using Simplex method, show that the following LPP admits an infinite number of solutions. **5**

$$\begin{aligned} Max \quad & Z = 3x + 9y \\ sub\ to \quad & 2x + 3y \leq 6 \\ & 2x + 6y \leq 6 \\ & x,\ y \geq 0 \end{aligned}$$

Or

(ii) Apply the Two-phase Simplex method to show that the following LPP has unbounded solution. **5**

$$\begin{aligned} Max \quad & Z = 2x_1 - x_2 + x_3 \\ sub\ to \quad & x_1 + x_2 - 3x_3 \leq 8 \\ & 4x_1 - x_2 + x_3 \geq 2 \\ & 2x_1 + 3x_2 - x_3 \geq 4 \\ & x_1,\ x_2,\ x_3 \geq 0 \end{aligned}$$

Module VI

(Marks-24)

Differential Equations

Answer any two questions (6x2)

6. (a) Show that the differential equation of the parabolas, with axis parallel to the y-axis and with distance from vertex to focus fixed at a, is given by $2a\frac{d^2y}{dx^2} = 1$. **4**

   (b) Find the particular solution of the equation $\frac{dy}{dx} = (4x + y + 1)^2$, if y=1 when x=0. **2**

7. (a) Amit invests Rs. 6000/- at the rate of 6 percent per annum, interest being compounded continuously. When will the sum double itself? **4**

   (b) Prove that $\frac{1}{(x+y+1)^4}$ is an integrating factor of the ODE :

   $(2x - y - 1)ydx + (2y - x - 1)xdy = 0$. **2**

8. Reduce the equation $(px^2 + y^2)(px + y) = (p+1)^2, p = \frac{dy}{dx}$ to Clairaut's form by using the substitution $u = xy, v = x + y$ find its complete primitive. **2+4**
9. (a) What is the difference between orthogonal and oblique trajectories? **2**
   (b) Show that the equation of the orthogonal trajectories of the family of curves $(x-1)^2 + y^2 + 2ax = 0$ is $x^2 + (y-c)^2 = 1 + c^2$. **4**

Analysis

Answer any three questions (4x3)

10. (a) Determine a, b, c such that $\lim_{x\to 0} \frac{x(a + b\cos x) + c\sin x}{x^5} = \frac{1}{60}$. **2**

    (b) If f' exists in [0,1], show that $f(1) - f(0) = \frac{f'(x)}{2x}$ has at least one solution in (0,1). **2**
11. Show that the infinite series $\left(\frac{3}{2} - \frac{4}{3}\right) + \left(\frac{5}{4} - \frac{6}{5}\right) + \ldots + \left(\frac{2n+1}{2n} - \frac{2n+2}{2n+1}\right) + \ldots$ is convergent whereas the series $\frac{3}{2} - \frac{4}{3} + \frac{5}{4} - \frac{6}{5} + \ldots$ obtained from the above series by ignoring parentheses is not convergent. **4**
12. If f is derivable on a closed interval [a,b] and $f'(a) < k < f'(b)$ then show that there exists at least one point $c \in (a,b)$ such that $f'(c) = k$, where k is a real number. **4**
13. State and prove Taylor's theorem with Lagrange's form of remainder. **4**
14. (a) What is the geometrical interpretation of Lagrange's MVT. **2**

    (b) Discuss the convergence of $\sum_n (-1)^n \frac{\log n}{n}$. **2**

Module VII

(Marks 9)

Application of Calculus

Answer any three questions (3x3)

15. If $lx + my = 1$ is a normal to the parabola $y^2 = 4ax$, then show that $al^3 + 2alm^2 = m^2$. **3**
16. Find the radius of curvature at the origin for the curve $x^3 + y^2 - 2x^2 + 6y = 0$. **3**
17. Show that the asymptotes of the curve $x^2y^2 = a^2(x^2 + y^2)$ form a square of side 2a. **3**
18. Find the envelope of the family of ellipses $\frac{x^2}{\beta^2} + \frac{y^2}{(a-\beta)^2} = 1$, β being the parameter. **3**
19. Find the tangent and the normal to the curve $y(x-2)(x-3) - x + 7 = 0$ at the point where it cuts the x-axis. **3**

Module VIII

(Marks 25)

Dynamics of Particle

Answer any three questions (5x3)

20. (a) A particle moves along a straight line where its distance x at time t is given by $x^2 = at^2 + 2bt + c$, where a, b, c are constants. Prove that the acceleration varies as $\frac{1}{x^3}$. **2**

    (b) Derive an expression of kinetic energy of a particle of mass m moving with a velocity v. What do you mean by conservative force field? **2+1**

21. A mass is suspended from a ceiling by a light elastic string of natural length *l*. When the mass hangs in equilibrium, the length of the string is *l*+*c*. The mass is started off from this position of equilibrium with downward vertical velocity v. If in the subsequent motion the string never becomes slack, show that $v^2 < cg$. **5**

22. Prove that if a particle moves under the conservative system of forces, the sum of its kinetic and potential energies remains constant throughout the motion. **5**

23. A particle moves towards a centre of force O, the acceleration at a distance x from O being $n^2 x$, starting from rest at a distance 'a' from O; when at a distance $\frac{\sqrt{3}}{2}a$ from O, the particle receives a velocity *na* from O. Show that the new amplitude of oscillation is $\sqrt{3}a$. **5**

Analytical Geometry of 3 Dimensions II

Answer any two questions (5x2)

24. (a) Find the equation of the cone with vertex (1,1,3) and guiding curve $x^2 + 2y^2 = 1, z = 4$

    (b) Find the equation of the circle on the sphere $x^2 + y^2 + z^2 = 49$ whose centre is at (2,-1,3). **3+2**

25. Find the equations of the spheres passing through $x^2 + y^2 + z^2 = 5, x + 2y + 3z = 3$ and touching the plane $4x + 3y = 15$. **5**

26. Find the equation of the cylinder whose generators are parallel to the straight line $\frac{x}{-1} = \frac{y}{2} = \frac{z}{3}$ and whose guiding curve is $x^2 + 4y^2 = 9, z = 1$. **5**

27. Show that the plane $lx + my + nz = 1$ is a tangent plane to the ellipsoid $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$, if $a^2l^2 + b^2m^2 + c^2n^2 = 1$. Also find the point of contact. **4+1**

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Netaji Nagar Day College

Internal Assessment, 2021

B.Sc. (Botany Honours) Semester I

CC – 2, Mycology & Phytopathology

Total Marks: 10 **Duration: 30 Mins**

Answer any 10 questions of the following : **1 X 10=10**

1. What is rhizomorph ?
2. Define plasmodium.
3. Name the sexual spore of *Rhizopus* sp.
4. Give an example of edible lichen.
5. What is arbuscule ?
6. What is wart ?
7. Give an example of sporadic disease.
8. What is pathotoxin ?
9. Name an elicitor of SAR.
10. Give an example of biotroph.
11. Define disease triangle.
12. Give an example of resistant variety against late blight of potato.

Netaji Nagar Day College
Internal Exam 2021
Sem2 English Hons **Total time 1hr**
Paper CC3 CC4

5+5

CC3

Answer any two questions in your own words as far as possible.

1. Write a note on the symbolic representation of bonsai in 'Bravely Fought the Queen'

2. Comment briefly on the ending of the poem 'A River ' by Ramanujan which you have studied.

3. Describe in your own words the central idea of the poem 'Enterprise'.

4. Attempt a short note on the character of Madhav in 'Rajmohan's Wife '.

CC4

Attempt any two questions: **5+5**

1. Sketch briefly the character of Isabella in Edward ll.

2. Discuss in short why 'The Good Morrow' is considered as an example of a metaphysical poem.

3. Write a short note on the use of Irony in 'Twelfth Night '.

4. Explain briefly the meaning of the last two lines of Sonnet 18 in relation to the theme of the poem.

NETAJI NAGAR DAY COLLEGE

(Under Graduate & Post Graduate Institution)
Affiliated to University of Calcutta
Accredited by NAAC (B^{++})
170/436, N.S.C. BOSE ROAD
REGENT ESTATE – KOLKATA - 700092

Ref. No..... *Date:* **10.07.2021**

Notice for Semester 4

Students of BA/B.Sc./B.Com **Semester 4** are hereby informed to submit online application form through www.cuexam.net or www.cuexamwindow.in for appearing in Semester 4 Examination of 2021 of University of Calcutta, between **12.07.2021** and **19.07.2021**.

They are directed to submit the print copy of the application form submitted online, and the Tuition fee payment receipt to the College office on **15.07.2021** or **23.07.2021** (from 12 noon to 3 pm).

SBJash

Principal
Netaji Nagar Day College

Principal
Netaji Nagar Day College
Kolkata - 700 092

Netaji Nagar Day College
Internal Assessment 2021
Semester IV
Sub: Taxation I (CC 4.1 Ch) & (CC 4.1 Cg)

From the following particulars calculate the Income under the head 'Salary' of Ms A, for the assessment year 2021-22.

- Basic salary received in March 2021 is Rs 9,500 (an increment of Rs 500 falls due on each July).
- Dearness allowance is Rs 2,000 per month.
- House rent allowance (HRA) received is Rs 1,000 per month (she stays in her own house).
- She encashed leave worth Rs 25,000 during the year.
- Professional tax paid during the year Rs 1,440.

Show the calculation and mark the correct options provided below:

5 x 2 = 10

1. For being taxed under the head 'Salary', there should be

a) Some service rendered against consideration
b) Employer-employee relationship
c) None of the above
d) Both of the above

2. Basic salary earned during the year

a) Rs 1,12,500
b) Rs 1,14,000
c) Rs 1,08,000
d) Rs 1,00,000

3. Taxable HRA

a) Rs 10,000
b) Rs 12,000
c) Rs 9,000
d) Nil

4. Taxable leave salary encashed

   a) Rs 20,000
   b) Rs 8,000
   c) Rs 25,000
   d) Rs 3,000

5. Income under the head ‘Salary’ of Ms A is

   a) Rs 2,50,000
   b) Rs 1,73,500
   c) Nil
   d) Rs 1,22,060

Email addresses for sending the answers:

For Hons students: nndcbcomsem4hons@gmail.com

For Gen students: nndcbcomsem4gen@gmail.com

Netaji Nagar Day College.
B.Sc. Semester VI Zoology (Gen.) Internal Examination, 2021.
Paper: ZOOG-DSE-B-6-2-TH
Ecology and Wild life Biology

Time: 30 mins. Full marks: 10

Answer any ten questions from the following. 1X10=10

1. Detritus food chain in comparison to grazing food chain is

a. Generally longer
b. Generally equal
c. Generally shorter
d. None of these

1 ডেট্রিটাস খাদ্য শৃঙ্খল , গ্রেজিং খাদ্য শৃঙ্খলের তুলনায়
a সাধারণত দীর্ঘ।
b সাধারণত সম দীর্ঘ।
c সাধারণত ক্ষুদ্রতর।
d কোনটি সঠিক নয়।

2.Trophic levels in a food chain are formed by

a.Producers
b.Consumers
c. Decomposers
d. All the above

2. একটি খাদ্য শৃঙ্খলের ট্রফিক লেভেল গঠিত হয়
a উৎপাদক দ্বারা
b খাদক দ্বারা
c বিয়োজক দ্বারা
d উপরের সব কটি দ্বারা।

3.Food web is constituted by

a.Various interlinked food chains in a community
b.Relationship between animals and plants
c.Relationship between organisms and their environment
d.Relationship between animals, plants and microbes

3. খাদ্য জাল গঠিত হয়
a একটি বাস্তুতন্ত্রে পরস্পর সম্পর্কিত খাদ্য শৃখল দ্বারা।
b উদ্ভিদ ও প্রাণীর পারস্পরিক সম্পর্ক দ্বারা
c জীব ও পরিবেশের মধ্যে সম্পর্ক দ্বারা

d উদ্ভিদ, প্রাণী ও অণুজীব এর পারস্পরিক সম্পর্ক দ্বারা।

4.Energy flow in an ecosystem is

a.Uni directional
b.Bidirectional
c.Multidirectional
d.All the above

4. একটি বাস্তুতন্ত্রে শক্তির প্রবাহ
a একমুখী
b দ্বি মুখী
c বহুমুখী
d উপরের সব কটি সঠিক।

5.Which one is not a factor of the abiotic environment?

a.Sunlight
b.Decomposers
c.Water
d.Temperature

5. কোনটি বাস্তুতন্ত্রে অজৈব উপাদান নয় ?
a সূর্যালোক
b বিয়োজক
c জল
d তাপমাত্রা।

6.The food chain in which microorganisms break down the energy rich compounds synthesized by producers

a. Predator food chain
b. Parasitic food chain
c. Detritus food chain
d. None of these

6 যে খাদ্য শৃঙ্খলে অণুজীব , উৎপাদক দ্বারা উৎপন্ন শক্তি যুক্ত জটিল যৌগ ভেঙে দেয়, তা হল
a শিকারী খাদ্য শৃঙ্খলা
b পরজীবী খাদ্য শৃঙ্খলা
c মৃতজীবী খাদ্য শৃঙ্খলা
d কোনটি নয়।

7.Rate of storage of organic matter not used by heterotrophic is termed as

a. Net productivity

b. Net primary productivity
c. Gross primary productivity
d. Secondary productivity

7 পরভোজী দ্বারা অব্যবহৃত জৈব বস্তুর জমা থাকার হার কে বলা হয়
a মোট উৎপাদনশীলতা ।
b মোট প্রাথমিক উৎপাদনশীলতা
c গ্রস প্রাথমিক উৎপাদনশীলতা
d গৌণ উৎপাদনশীলতা।

8.Graphic representation of biomass relationship between the Producers and Consumers in an ecosystem is called

a. Trophic level
b. Ecological system
c. Ecological Niche
d. Ecological pyramid

8.উৎপাদক ও খাদকের মধ্যে জৈবভর সম্পর্কিত রেখ চিত্র কে বলা হয়
a ট্রফিক লেভেল
b বাস্তুতন্ত্র।
c বাস্তুতন্ত্রিক নিচ
d বাস্তুতান্ত্রিক পিরামিড।

9.Which one of the following is not included under in-situ conservation?

a. National park
b. Sanctuary
c. Botanical garden
d. Biosphere reserve

9 ইন সিটু সংরক্ষণ এর মধ্যে নিম্নের কোনটি গণ্য করা হয় না।
a জাতীয় উদ্যান।
b অভয়ারণ্য।
c উদ্ভিদ উদ্যান।
d বায়োস্ফিয়ার রিজার্ভ

10.Which one of the following is the correctly matched pair of an endangered animal and a national park?

a. great indian : Keoladeo national park bustard
b lion : Corbett national park
c. rhinoceros : Kaziranga national park
d. wild ass : Dudhwa national park

10 বিপন্ন প্রজাতি ও জাতীয় উদ্যান এর কোন জোড়াটি সঠিক ভাবে মেলানো হয়েছে ?
a গ্রেট ইন্ডিয়ান বাস্টার্ড : কেওলাদেও জাতীয় উদ্যান।

b সিংহ: করবেট জাতীয় উদ্যান।
c গণ্ডার: কাজিরাঙা জাতীয় উদ্যান।
d বুনো গাধা : দুধওয়া জাতীয় উদ্যান।

11.Which of following statement is true about the Ecotone?
a. It is meeting place of two different eco systems
b. It is meeting place of two same eco systems
c. Density of species is very low here
d. All of the above.
11. নিম্নের কোন বক্তব্যটি ইকোটোন সম্পর্কে সত্য
a এটি দুটি আলাদা বাস্তু তন্ত্রের মিলন স্থল।
b এটি একই রকম দুটি বাস্তুতন্ত্রে র মিলন স্থল।
c এখানে জীব প্রজাতি ঘনত্ব খুব কম।
d উপরের সব কটি সঠিক।

12.Bandipur Tiger Reserve And National Park is located in_____.
a. Bihar
b.Karnataka
c. Kerala
d.TamilNadu

12. বন্দিপুর ব্যাঘ্র প্রকল্প এবং জাতীয় উদ্যান অবস্থিত
a বিহার
b কর্নাটক
c কেরালা
d তামিলনাড়ু।