Department of Mathematics

Internal Examination 2022

2nd Semester

CC 03

Answer any two. $5 \times 2 = 10$

1. Define Cauchy Sequence. State whether the sequence $\{n^2\}$ is a Cauch Sequence or not. Show that $\sqrt[n]{n} \to 1$ as $n \to \infty$. $1 + 2 + 2$

2. State and prove the Sandwich Theorem. Give an example of a monoton increasing sequence. $4 + 1$

3. Test the convergence of the series $\sum \left[\frac{2.4.6.8....2n}{3.5.7.9....(2n+1)}\right]^2$ 5

4. State and prove the Cauchy root test for the convergence of an infinit series. 5

CC 04

Answer any two $5 \times 2 = 10$

1. Solve by using the method of Variation of Parameters

$$\frac{d^2y}{dx^2} - 2\frac{dy}{dx} = e^x \sin x$$

2. Solve using the method of undetermined co-efficient

$$y_2 - 2y_1 + 3y = \cos x + x^2$$

3. Solve:

$$\frac{d^2x}{dt^2} - 3x - 4y + 3 = 0$$

$$\frac{d^2y}{dt^2} + y + x + 5 = 0$$

Internal Examination 2021

DEPARTMENT OF MATHEMATICS

Internal Examination -SEMESTER-I

Course: MATH-H-GE-T-01

Course title: Differential Calculus

Answer the following questions. $5 \times 2 = 10$

1. Find all the asymptotes of the curve
$$2x^3 - x^2y - 2xy^2 + y^3 - 4x^2 + 8xy - 4x + 1 = 0$$
2. If $y = \sin(m \sin^{-1} x)$, then using Leibnitz's theorem show that,
$$(1 - x^2)y_{n+2} - (2n + 1)xy_{n+1} + (m^2 - n^2)y_n = 0$$

Send answer sheet in the following mail id:
subhajit@nvc.ac.in

Internal Examination –Semester-I

Mathematics (General)-CC-T-01

Differential Calculus, F.M.-10

(i) If $y = e^{a\sin^{-1}x}$, show that

$$(1 - x^2)y_{n+2} - (2n + 1)xy_{n+1} - (n^2 + a^2)y_n = 0.$$

Hence find $(y_n)_0$.

(ii) If ρ and ρ_1 be the radii of curvature at the ends of two conjugate diameters of an ellipse, prove that

$$\rho^{\frac{2}{3}} + \rho_1^{\frac{2}{3}} = \frac{b^2 + a^2}{(ba)^{\frac{2}{3}}}.$$

[3+3+4]

Send answer sheet in the following mail id:
chinmay@nvc.ac.in

Result of 1st Internal Examination

Department of Mathematics

Year: 2021 Semester: V Course: DSE-01 Full marks: 10

Roll No	Name	Marks Obtained
1	ANIMESH SAHA	09
2	ANUPAMA MONDAL	10
3	ARIJIT KUNDU	10
4	ARINDAM BANERJEE	10
5	ARPITA BISWAS	08
6	AZIBUL ANSARI	09
7	BAPAN SADHUKHAN	08
8	BIKRAM DEBNATH	10
9	BIMAL GHOSH	09
10	BISWAJIT GHOSH	07
11	DEBAYAN DAS	08
12	DEBKANTA SIKDER	08
13	HANIFUDDIN SHAIKH	09
14	INJAMAM UL SHEIKH	10
15	JAGANNATH HALDER	10
16	JATAN MONDAL	09
17	KALYAN GHOSH	08
18	KOUSHIK BHOWMICK	07
19	MAMPI BISWAS	08
20	MANARUL SEKH	07
21	MASUD RANA MONDAL	10
22	MRINMAY BISWAS	10
23	NARAYAN GHOSH	10
24	NAYAN HALDER	09
25	NILANJAN SAHA	08
26	NIRMOY DEBNATH	07
27	NOORBANU KHATUN	10
28	PAYEL DAS	10
29	PAYEL DEBNATH	10
30	RABINDRANATH BISWAS	09
31	RAJA SHEIKH	09
32	RIYA DEBNATH	08
33	RIYA SAHA	07
34	RUPAK BISWAS	07
35	SAGAR SARKAR	08
36	SAMPA BASAK	10
37	SANJU GHOSH	10
38	SANJU SARKAR	07
39	SAYAN SAHA	08
40	SHUBHAM HALDER	07
41	SK MD SOFIK	09
42	SNEHA DAS	10
43	SOUHARDA BANERJEE	10
44	SOUMEN SAHA	10
45	SOURAV BAIRAGYA	09
46	SOURAV KUMAR BHAGAT	09
47	SUBRATA DAS	07
48	SUCHANDAN MONDAL	09
49	SUJAN PRAMANICK	09
50	SUMAN MITRA	10
51	SUMAN SHAIKH	10
52	SUVAJIT GHOSH	09
53	SWARNAVA SAHA	09
54	TOUFIK MALLICK	07
55	TUSHAR KANTI DATTA	09
56	TUSHAR RABI DAS	07
57	SUBHANKAR MODAK	09
58	RANA DEBNATH	10

Vidyasagar College

Result of 1st Internal Examination

Department of Mathematics

Year: 2021 Semester: IV Course: CC-09 Full marks:

Sl. No.	Name	Marks Obtained
1	Ankita Debnath	09
2	Antara Ghosh	10
3	Anwesha Debnath	08
4	Arpita Saha	08
5	Atreyee Sarkar	Ab
6	Chandrima Debnath	09
7	Deepa Basak	10
8	Disha Basak	09
9	Meghla Das	10
10	Rani Khatun	08
11	Rimi Debnath	07
12	Ripa Das	08
13	Ruksona Khatun	10
14	Sanhita Mondal	09
15	Sumana Rajak	09
16	Abhisek Kundu	09
17	Animesh Das	10
18	Arnab Das	Ab
19	Ayan Mondal (026286)	07
20	Ayan Mondal (081325)	08
21	Gopal Basak	10
22	Jasim Biswas	09
23	Jit Kumar Ghosh	08
24	Koushik Rajwar	09
25	Koushik Saha	09
26	Krishanu Dutta	10
27	Manojit Basak	10
28	Md. Wasim Mallick	08
29	Pritam Modak	07
30	Prodyut Pal	07
31	Rajdeep Saha	08
32	Ranit Basak	08
33	Ritam Saha	10
34	Saifuddin Sk	10
35	Sayan Bairagya	10
36	Shibam Podder	10
37	Shubhadwip Pramanik	07
38	Souvik Modak	07
39	Srimanta Paul	08
40	Suman Ghosh	08
41	Tanmay Pramanik	09
42	Tanmoy Podder	10
43	Sibasish saha	10

Samiran Senapati.

DEPARTMENT OF MATHEMATICS

INTERNAL ASSESSMENT 2020

QUESTIONS FOR MATH-H-CC-T-03

$1 \times 10 = 10$

Answer any one:

Q1. Show that between any two real numbers, there are infinitely many real numbers.

Q2. Does the series convergent or divergent

$$\sum_{n=1}^{\infty} \frac{n!\,(n+1)!}{(3n)!}$$

QUESTIONS FOR MATH-H-CC-T-04

$2 \times 5 = 10$

Answer any two:

1. Solve power series solution of the differential equation

$$\frac{d^2y}{dx^2} - 2x\frac{dy}{dx} + y = 0$$

2. Solve by the method of undetermined coefficients

$$\frac{d^2y}{dx^2} + 3\frac{dy}{dx} - 10y = -130cosx + 16e^{2x}$$

3. Show that if n is positive integer then

$\frac{1}{(D-\alpha)^n} e^{\alpha x} = \frac{x^n}{n!} e^{\alpha x}$ where $D \equiv \frac{d}{dx}$

4. Solve $(D-3)^2(D+2)y = 2e^{3x}$

QUESTIONS FOR MATH-H-CC-T-08

$1 \times 10 = 10$

Answer any one:

Q1. State the necessary and sufficient condition of integrability. Show that the function $f:[a,b] \to \mathbb{R}$, which is continuous on [a,b], is also Riemann integrable on [a,b].

Q2. Let $f(x)$ be periodic function with the period 4 and

$$f(x) = x \text{ in } 0 < x < 2.$$

Expand $f(x) = x$ in the Fourier series in the half range $0 < x < 2$. Hence deduce that

$$\frac{1}{1^2} + \frac{1}{3^2} + \frac{1}{5^2} + \cdots . to\ \infty = \frac{\pi^2}{8}$$

SECOND INTERNAL ASSESSMENT , 2019
DEPARTMENT OF MATHEMATICS
NABADWIP VIDYASAGAR COLLEGE

FULL MARKS: 40 TIME 1 H 30 MIN

CC-1

Answer any four questions: $5 \times 4 = 20$

1.1 Find the constant a and b so that $\lim_{x\to 0}\left(\frac{\sin 2x}{x^3}+\frac{a}{x^2}+b\right)=1$

1.2 If the cost C of producing x unit of a particular commodity is $C(x)=\frac{1}{8}x^2+5x+98$ an the selling price P when x units are produced is $P(x)=\frac{1}{2}(75-x)$, then determine th level of production that maximizes the profit.

1.3 Derive the reduction formula for $\int(\log x)^n dx, n \geq 1$. Hence evaluate $\int(\log x)^4 dx$.

1.4 Find the arc length of the curve $y=\frac{x^3}{24}+\frac{2}{x}$ from $x=2$ to $x=3$

1.5 A sphere of radius r passes through the origin and meets the co-ordinate axes at P,Q,I Prove that the triangle PQR lies on the sphere $9(x^2+y^2+z^2)=4r^2$.

1.6 Find the equation of the cone whose vertex is at the point (α,β,γ) and whos generating lines passes through the curve $\frac{x^2}{a^2}+\frac{y^2}{b^2}=1, z=0$.

1.7 Solve: $(x^2-4xy-2y^2)dx+(y^2-4xy-2x^2)dy=0$.

1.8 Solve: $(x+\tan y)dy=\sin 2y\,dx$.

CC-2

Answer any four questions: $5 \times 4 = 20$

2.1 For n real numbers prove that A.M $\geq$ G.M.

2.2 Solve the equation $x^3-18x-35=0$ by Cardan's Method.

2.3 Use Euclidean algorithm to find integers u and v satisfying $30u+72v=12$.

2.4 A relation ρ is defined on the set $\mathbb{Z}$ by "$a\rho b$ if and only if $a-b$ is divisible by 5" fc $a,b \in \mathbb{Z}$. Examine if ρ is an equivalence relation on $\mathbb{Z}$.

2.5 Determine the condition for which the system

$$x+y+z=1, \quad x+2y-z=b, \quad 5x+7y+az=b^2$$

has (i) only one solution (ii) no solution (iii) many solution.

2.6 Apply elementary row operation to reduce the matrix $\begin{pmatrix}2&0&4&2\\3&2&6&5\\5&2&10&7\\0&3&2&5\end{pmatrix}$ to a row echelo matrix.

2.7 Determine the rank of the matrix $\begin{pmatrix}1&2&1&0\\2&4&8&6\\3&6&6&3\end{pmatrix}$.

2.8 Find the eigen values and corresponding eigen vectors of the matrix $\begin{pmatrix}2&2&1\\1&3&1\\1&2&2\end{pmatrix}$.

First Internal Assessment 2018

NABADWIP VIDYASAGAR COLLEGE

MATH-H-CC-T-01

FM-10, TIME-20min.

Answer any two questions :- $5 \times 2 = 10$

1. If $y = e^{msin^{-1}x}$, prove that $(1-x^2)y_{n+2} - xy_{n+1}(2n+1) - (m^2+n^2)y_n = 0$.Also find $(y_n)_0$.
2. Show that I.F. of $\frac{dy}{dx} + Py = Q$ is $e^{\int Pdx}$.
3. Establish the formula of $\int sin^m x cos^n x dx$, $m > 1, n > 1$. Hence find $\int sin^5 x cos^3 x dx$.
4. Write the parametric equations of the Astroid $x^{\frac{2}{3}} + y^{\frac{2}{3}} = a^{\frac{2}{3}}$. Find the exact length of the curve $x = \cos 3t, y = \sin 3t, 0 \le t \le .\pi$.

First Internal Assessment 2018

NABADWIP VIDYASAGAR COLLEGE

MATH-H-CC-T-02

FM-10, TIME-20min.

Answer any two questions :- $5 \times 2 = 10$

1. Express z in polar form, where $z = 1 - i$. State De Moivre's theorem . Applying De Moivre's theorem, prove that $tan4\theta = \frac{4tan\theta - 4tan^3\theta}{1-6tan^2\theta+tan^4\theta}$.
2. State and prove fundamental theorem of arithmetic.
3. Find the rank of the matrix $\begin{pmatrix} 2 & -1 & 1 & 4 \\ 1 & 0 & 1 & 5 \\ 4 & -1 & 3 & 14 \\ 3 & -1 & 2 & 9 \end{pmatrix}$.
4. State whether the function is injective or not and surjective or not. Hence find f^{-1}, where $f: R \to R$ by $f(x) = \frac{x}{1-|x|}$.

Nabadwip Vidyasagar College

Department: Computer Science

Subject: System Programming – (UG-II-DSE-L-603)

1st Internal Examination, April 2022

Semester- VI

Time: 40 Min | Full Marks: 20

Group-A **5X1=5**

1. In which of the following phase of the compiler is Lexical Analyzer? a) Second b) Third c) First d) All of the mentioned
2. Which of the following error can Compiler diagnose?
   a) Logical errors only b) Grammatical and logical errors c) Grammatical errors only d) All of the mentioned
3. Characters are grouped into tokens in which of the following phase of the compiler design?
   a) Code generator b) Lexical analyzer c) Parser d) Code optimization
4. Who is responsible for the creation of the symbol table? a) Assembler b) Compiler c) Interpreter d) All of the mentioned
5. Which of the following derivations does a top-down parser use while parsing an input string?
   a) Leftmost derivation b) Leftmost derivation in reverse c) Rightmost derivation d) Rightmost derivation in reverse

Group-B **5X1=5**

1) What is LEX?
2) What is stack storage allocation?
3) What is YACC in Compiler?
4) What is ambiguity in Grammar?
5) What are the types of Symbol Table?

Group-C **5X2=10**

(Answer any two questions from the following)

1) Check the grammar is LR(0) or not
   E->T+E|T
   T-> i
2) With the help of operator precedence grammar parse the input string id+id*id
   T->T+T|T*T|id
3) Solve the following grammar using LL(1)
   E->E+T|T
   T->T*F|F
   F->(E)|id
4) What are the different phases of compiler? Explain the phases in detail.

Notice

Dated - 21.04.22

This is to inform you that the Internal examination of 2nd Sem, 4th and 6th Sem will be held on 05.05.2022 at respective classrooms from 11 AM to 1 PM. Mode of the exam is offline. Attendance is mandatory in all the exams.

Nimisha Ray

Nimisha Ray

6th Sem

Name	Sem	Roll	CC 13	CC-14	DSE 3
Aditi Mitra	6th	1	9	9	8
Ankita Bairagi	6th	2	9	9	8
Arijit Saha	6th	3	7	8	7
Ayan Mondal	6th	4	6	7	5
Bipin Chakraborty	6th	5	8	8	8
Rohan Das	6th	6	8	9	8
Souvik Modak	6th	8	7	6	7
Subhojyoti Roy	6th	9	8	9	9

4th Sem

Name	Sem	Roll	CC 8	CC 9	CC 10	SEC
Rokeya Khatun	4th	1	9	9	9	9
Archit Saha	4th	5	9	9	9	9
Atanu Debnath	4th	6	10	9	9	9
Mainak Ghosh	4th	9	9	8	7	8
Pritam Ghosh	4th	11	6	8	8	8
Ratan Garai	4th	12	9	8	6	8
Rittu Ghosh	4th	13	8	8	8	7
Rupam Bhattacharya	4th	14	8	9	7	8
Soumyadip Paul	4th	15	9	8	8	9
Tanmoy Biswas	4th	17	7	9	7	7

2nd Sem

Name	Sem	Roll		CC 4
Ankita Roy	2nd	1	10	9
Barnali Das	2nd	2	9	8
Anupam Dey	2nd	3	8	7
Arup Debnath	2nd	4	9	8

Department of Computer Science
Nabadwip
Nadia
741302
Nabadwip Vidyasagar College

Nimisha Ray

Bijoy Das	2nd	5	7	7
Jit Chatterjee	2nd	6	7	7
Kalyan Das	2nd	7	7	7
Kishore Mondal	2nd	8	8	7
Rajdip Sen Chowdhury	2nd	9	7	8
Sankar Chakraborty	2nd	10	7	8
Subir Saha	2nd	14	10	9
Suman Debnath	2nd	15	9	9

Department of Computer Science * Nabadwip Vidyasagar College * Nabadwip Nadia 741302

Nimisha Ray

Nabadwip Vidyasagar College

Computer Science
Internal Examination 2021
Computer Network CC-9

1. The data link layer takes the packets from _____ and encapsulates them into frames for transmission.
a) network layer
b) physical layer
c) transport layer
d) application layer
View Answer

2. Which of the following tasks is not done by data link layer?
a) framing
b) error control
c) flow control
d) channel coding
View Answer

3. Which sublayer of the data link layer performs data link functions that depend upon the type of medium?
a) logical link control sublayer
b) media access control sublayer
c) network interface control sublayer
d) error control sublayer
View Answer

4. Header of a frame generally contains _____
a) synchronization bytes
b) addresses
c) frame identifier
d) all of the mentioned
View Answer

5. Automatic repeat request error management mechanism is provided by _____
a) logical link control sublayer
b) media access control sublayer
c) network interface control sublayer
d) application access control sublayer
View Answer

6. When 2 or more bits in a data unit has been changed during the transmission, the error is called _____
a) random error
b) burst error
c) inverted error
d) double error
View Answer

7. CRC stands for _____
a) cyclic redundancy check
b) code repeat check
c) code redundancy check

Notice Dated - 11.03.2021

This is to inform you that the Internal examination of 2nd Sem and 4th Sem will be held via online mode on 18.03.2021 at respective google classrooms from 11 AM to 1 PM. Attendance is mandatory in all the exams.

Nimisha Ray

Nimisha Ray

Department of Computer Science
Nabadwip Vidyasagar College
Nabadwip
Nadia
741302

Internal Examination 2021 Result

3rd Sem

Name	Sem	Roll	CC 5	CC 6	CC 7	SEC
Rokeya Khatun	3rd	1	10	9	8	10
Archit Saha	3rd	5	9	9	9	9
Atanu Debnath	3rd	6	10	8	9	10
Mainak Ghosh	3rd	9	10	8	8	8
Pritam Ghosh	3rd	11	7	6	7	7
Ratan Garai	3rd	12	9	8	8	8
Rittu Ghosh	3rd	13	8	7	7	7
Rupam Bhattacharya	3rd	14	8	8	9	8
Soumyadip Paul	3rd	15	9	9	9	10
Tanmoy Biswas	3rd	17	7	7	7	7

1st Sem

Name	Sem	Roll	CC 1	CC 2
Ankita Roy	1st	1	10	10
Barnali Das	1st	2	9	9
Anupam Dey	1st	3	8	7
Arup Debnath	1st	4	9	7
Bijoy Das	1st	5	7	8
Jit Chatterjee	1st	6	7	8

Department of Computer Science * Nabadwip Vidyasagar College * Nabadwip Nadia 741302

Nimisha Ray

Kalyan Das	1st	7	7	7
Kishore Mondal	1st	8	8	7
Rajdip Sen Chowdhury	1st	9	7	8
Sankar Chakraborty	1st	10	7	8
Subir Saha	1st	14	10	10
Suman Debnath	1st	15	9	10

Department of Computer Science * Nabadwip Vidyasagar College * Nabadwip Nadia 741302

Nimisha

Nabadwip Vidyasagar College

B.Sc in Computer Science

2nd Sem Internal Examination 2020

Programming using C++

Answer Any 4 Questions (4*5=20)

1. What is the difference between C and C++?

2. What are class and object in C++? What do you mean by Constructor?

3. What is the difference between struct and class?

4. Write down a short note on Polymorphism.

5. Write a c++ program to print fibonacci series without using recursion and using recursion.

Notice Dated - 10.04.2020

This is to inform you that the Internal examination of 2nd Sem will be held via online mode on 23.04.2020 at respective google classrooms from 11 AM to 12.15 PM. Attendance is mandatory in all the exams.

Nimisha Ray

Nimisha Ray

Department of Computer Science

Department of Computer Science
Nabadwip
Nadia
741302
Nabadwip Vidyasagar College

Internal Examination 2020

Result

2nd Sem

Name	Sem	Roll	CC 3	CC 4
Rokeya Khatun	2nd	1	10	9
Archit Saha	2nd	5	10	9
Atanu Debnath	2nd	6	10	8
Mainak Ghosh	2nd	9	10	8
Pritam Ghosh	2nd	11	7	7
Ratan Garai	2nd	12	9	8
Rittu Ghosh	2nd	13	9	8
Rupam Bhattacharya	2nd	14	9	8
Soumyadip Paul	2nd	15	9	9
Tanmoy Biswas	2nd	17	9	8

Name	Sem	Roll No.	CC-8	CC-9	CC-10	SEC
Aditi Mitra	4th	1	9.5	8	9	8
Ankita Bairagi	4th	2	8.5	9	9.5	9
Arijit Saha	4th	3	7	7	8	6
Ayan Mandal	4th	4	6	7	7	6
Bipin Chakraboarty	4th	5	8	7	7	7
Rohan Das	4th	6	9	9	9	8
Souvik Modak	4th	8	7	6	7	6
Subhojyoti Roy	4th	9	8	8.5	9	7

Internal Examination 2020

Result

Nimisha Ray

Department of Computer Science
Nabadwip Nadia 741302
Nabadwip Vidyasagar College

Name	Sem	Roll	CC 11	CC 12	DSE 1	DSE 2
Aditi Mitra	5th	1	9	9	8	9
Ankita Bairagi	5th	2	9	10	8	9
Arijit Saha	5th	3	8	8	7	7
Ayan Mondal	5th	4	6	7	6	6
Bipin Chakraborty	5th	5	8	9	7	8
Rohan Das	5th	6	9	10	9	8
Souvik Modak	5th	8	7	7	7	7
Subhojyoti Roy	5th	9	9	9	8	9

Nabadwip Vidyasagar College

B.Sc in Computer Science

1st Internal Exam 2019

Sem- 1st

Computer Fundamentals & Introduction to C Programming

F.M- 20 Time- 40 Mins

Answer the Following Questions- (Any 4) (4*5=20)

1. What do you mean by K-Map? Write down the simplified equation for the given function F=m(2,3,4,5,10,11,12).

2. Describe the generations of Computers in brief.

3. Differentiate between While & Do-While Loop.

4. Write a program to swap two numbers without using any third variable.

5. What do you mean by Preprocessor Commands? Write down the significance printf & scanf.

Digital System & Design

F.M-20 **Time- 40 Mins**

Answer all Questions(4*5=20)

- Write down the working principle of Full Adder.
- Write down a short note on Ring Counter.
- Write down the working principle of JK Flip Flop.
- State & prove De Morgan's Law.

1st Internal Result- 2019

Department of Computer Science

Name	Sem	Roll	CC-1	CC-2
Aditi Mitra	1st	1	9	10
Ankita Bairagi	1st	2	10	10
Arijit Saha	1st	3	8.5	8.5
AYAN MONDAL	1st	4	6	6
Bipin Chakraborty	1st	5	7	7
Rohan Das	1st	6	10	10
Souvik Modak	1st	8	6	6
Subhojyoti Roy	1st	9	10	10

1st Internal Result- 2020

Department of Computer Science

Name	Sem	Roll	CC-3	CC-4
Aditi Mitra	2nd	1	10	10
Ankita Bairagi	2nd	2	10	10
Arijit Saha	2nd	3	9	9
AYAN MONDAL	2nd	4	8	8
Bipin Chakraborty	2nd	5	9	9
Rohan Das	2nd	6	10	10
Souvik Modak	2nd	8	10	9
Subhojyoti Roy	2nd	9	10	10

Department of Computer Science * Nabadwip Vidyasagar College * Nabadwip Nadia 741302

Nimisha Ray

INTERNAL EXAM

SEM-IV (HONOURS) SEC-2 2022

FM = 10, TIME 30 mins

Answer all questions:

1. Write the formula of citric acid, raw materials and microorganism used tomanufacture citric acid. 3

2. How citric acid crystals are obtained from calcium citrate precipitate? 2

3. What are drugs? What are the molecular components on which drugs wirk? 2

4. What are analgesics? Discuss the synthetic process for the preparation of paracetamol. 3

DEPARTMENT OF CHEMISTRY (INTERNAL RESULTS)

CIE SEM-V 2022

Course Code		CC 11		CC 12		DSE 1		DSE 2	
Name	Roll No	FM (10)	FM (10)	FM (10)	FM (20)	FM (10)	FM (10)	FM (10)	FM (10)
Debolina Dutta	2113126 1924710	7	8	9	18	10	10	4	6.5
JayoshriMallick	2113126-1924713	10	9	9	16	10	10	9	6.5
KhairunneshaKhatun	2113126-1924714	6	7	9	18	8	10	3	5
KoyelDalal	2113126-1924715	6	8	7	15	10	10	3	7.5
Nilanjana Das	2113126-1924722	10	10	9	18	10	10	9	7
Shreya Deb	2111126-1924740	10	10	4	13	10	10	10	6.5
Aparup Bose	2113126-1924757	10	10	9	11	10	10	7	5.5
Bijoy Ghosh	2113126-1924769	9	10	10	17	10	10	7	5.5
BitanDey	2113126-1924774	9	10	8	13	10	10	6	5.5
KajalMallick	2113126-1924785	9	10	7	16	10	10	6	5.5
Monotosh Biswas	2113126-1924790	10	10	7	10	10	10	8	6
SaikatRaut	2113126-1924817	8	8	6	16	10	10	6	6
Sourav Das	2113126-1924833	7	9	6	7	10	10	3	4.5

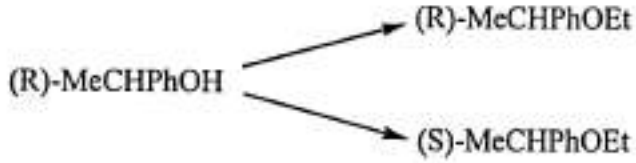
Haimmi Roychowdhury
29/8/22

QUESTIONS INTERNAL ASSESSMENT

SEM-II 2021

FM = 10; TIME-1h

1. a) Discuss the mechanism of SN1 reaction with evidence.
   b) Justify that SN1 reactions are always accompanied with some degree of inversion. 1+2 = 3
2. Arrange the following in order of increasing nucleophilicity.
   PhO^-, EtO^-, $NO2^-$, $MeCO2^-$ 2
3. Explain the lack of reactivity of α-halo carbonyl compounds in S_N1 reaction. 2
4. How will you carry out the following transformations:



3

Department		Chemistry						
Class		B.Sc (Hons.) Chemistry						
Semester		II (Internal Assessment)						
S.No.	Name of Student	Paper Code	CC3			CC4		
		Roll No	FM 20	FM 20	FM 10	FM 15	FM 20	FM 20
1	Dwip Das	2111126-2026264	14	18	10	8	7	13
2	Pritam Sen	2111126-2026302	14	20	10	8	7	14
3	Saikat Ghosh	2111126-2026318	9	20	10	6	6	7
4	Sandip Das	2111126-2026320	9	18	9	8	6	8
5	TitliKundu	2111126-2026227	9	20	9	10	17	20
6	Tiyasa Barman	2111126-2026228	9	18	10	6	6	9
7	SwarnavaMondal	2112126-2026353	A	18	A	A	A	A

29/8/22

NABADWIP VIDYASAGAR COLLEGE

Test Examination, 2018

Third year

Paper-VIII, Full Marks -75

Gr -A (*25 marks*) dt. 5/2/18

1. Answer ***any five*** of the following questions. 5 x 1 = 5

a) What is hypsochromic shift in the UV visible spectroscopy?

b) How will you verify a particular signal in ^1H NMR arises from the proton of the following groups : -OH, -SH, or –NH ?

c) Draw the LUMO of allyl cation.

d)How will you distinguish between H_2O and D_2O by IR spectra ?

e) Give an example of an illogical electrophile.

f) Name a drug having both antipyretic and analgesic actions.

g) Define chemical shift.

h) Why ethanol is a good solvent for UV measurement but not for IR.

Answer ***any two*** of the following----- 10 x 2 = 20

2.a) The UV absorption spectrum of *ortho* nitro phenol has λmax 350nm in 0.1M HCL, but in 0.1 M NaOH its λmax is shifted to 415nm.Explain. 3

b) The IR spectrum of ethyacetoacetate shows absorptions at 1748,1724 and 1750 cm-explain. 2

c) 2-tert-butyl phenol exhibits infrared peaks at 3605 and 3643 cm^{-1}, whereas 2,6- di-tert-butylphenol exhibits the peak only at 3643 cm^{-1}. Explain 2

d) What is meant by coupling constant in NMR spectroscopy? How do these coupling constant values help in the interpretation of NMR spectrum having non-equivalent hydrogen atoms ? 3

3.a) Draw the structures for the compounds that meet the following descriptions in ^1H NMR spectroscopy. (A) C_2H_6O ; one singlet (B)$C_4H_{10}O_2$; one singlet ,one triplet ,one quartet. 2

b) Biphenyl exhibits a very intense absorption band (ε_{max} = 19000) at 252 nm but its 2,2'-dimethyl derivative shows absorption almost similar to O-xylene (λmax = 262nm, ε_{max} = 270). Give reason. 3

c) Explain why NMR spectrum of benzene is observed at a lower field ? 3

d) Why $\nu_{C=O}$ frequency of β-lactone is higher compared to γ-lactone ? 2

4. a)Give with mechanistic explanation uses of the following reagents in organic synthesis. 2 + 2

(A) Diborane (B) $Pb(OAc)_4$

b) Write a short note on " Robinson annulations ". 3

c) Outline the steps of Hantzsch synthesis of pyridine. 3

Group B (Physical Chemistry)

Attempt *any five* questions **Marks: 50**

1. (a) Consider a system of n molecules, distributed among non-degenrate energy levels represented by $\varepsilon_0\varepsilon_1\varepsilon_2$....etc. Write down the expression for molecular partition function for the system. Show that internal energy (U) of a system can be expressed as $U = nkT^2\left(\frac{\partial \ln Q}{\partial T}\right)_v$ where k is Boltzman constant and T and V being temperature and volume of the system respectively 5

(b) Defining the molecular partition function $Z = \sum_i g_i e^{-\beta\varepsilon_i}$, show that $S = k(\beta E + N \ln Z)$ 5

2. (a) Is it absolutely essential for light to be absorbed directly by a molecule A_2 for its photochemical decomposition? 4

(b) NH_4Cl in equilibrium with its dissociation product is a one component system. Explain 3

(c) Thermodynamically non-spontaneous reaction may also take place spontaneously in presence of light-Explain 3

3. (a) Starting from the wave equation $\left(\frac{\partial^2\Psi}{\partial x^2}\right) = \frac{1}{u^2}\left(\frac{\partial^2\Psi}{\partial t^2}\right)$ for the standing wave system, derive the Schrödinger equation $\left(\frac{\partial^2\Psi}{\partial x^2}\right) = -\frac{4\pi^2}{\lambda^2}\Psi$ 6

(b) Prove that $i[\alpha, \beta]$ is a Hermitian if α and β are Hermitian 2

(c) Comment on Zero point energy of a one dimensional harmonic oscillator 2

4. (a) What do you mean the precise value in quantum mechanics. Calculate de Broglie wave length of an electron that has been accelerated through a potential difference of 300 volts 2+2

(b) Calculate degeneracy of the level having energy of $14\frac{h^2}{8ma^2}$ for a particle of mass m confined in a cubic box of dimension a 6

5. (a) Describe the phase diagram of sulphur and indicate the variance for every transition. 5

(b) A totally immiscible liquid system composed of H_2O and an organic liquid boils at 90°C when barometer reads 734 mm of Hg. The distillate contains 73% by weight of organic liuids. What is the molecular weight and vapour pressur at 90°C celcius of the organic liquids: [Vapous pressur of water is at 90°C =526 m.m.] 5

6. (a) What is difference in between Clausius-Mosotti equaton and Deby equation. Draw the Jabonski diagram and explain the terms used. 2+4=6

(b) In the far IR spectrum of HBr is a series of lines having a separation of 16.94 cm^{-1}. Calculate the momentum of inertia and the intermolecular distances. 4

7. (a) How do you define canonical ensemble, grand canonical ensemble and microcanonical ensemble? 6

(b) Suppose a molecules has two energy levels $\varepsilon_1 = 0$ and $\varepsilon_2 = KT$. Calculate (i) the partition function and (ii) ratio of the number of molecules in the two levels. 4

8. (a) Establish the Stern-Volmer equation from the mechanism of quenching of fluorescence. 5

(b) A $10^{-3} M$ solution of A also contains some B, and the solution when placed in a 2 cm cell absorbs 80% of the incident loght at a certain wavelength. If the extinction coefficient of A and B at this wavelength are 250 and 1000 respectively, find the concentration of B in the solution. 5

Internal Assessment for CC-1 (1st Semester) -2019

Answer all questions:

Time: 1 h

Marks: 10 x 1 = 10

1. Write down the radius expression of 'n'th Bohr orbit of a H like system. 1
2. State Hund's rule. 1
3. Give an example where limitation of aufbau principle is observed. 1
4. How many unpaired electrons present in Mn^{2+} ion ? 1
5. Calculate the radius of 4th Bohr orbit of hydrogen atom. (given r_1 =0.529 A^0) 1
6. Can an ideal gas be liquefying? 1
7. What is the critical temperature of CO_2 gas 1
8. How many number of vibrational degrees of freedom for SF_6 molecule 1
9. Write the expression for compressibility factor 1
10. Write the unit of vander Waal gas consta

RESULTS

B.Sc PART-III (HONS) TEST EXAMINATION, 2019

SUBJECT- CHEMISTRY (PAPER- VII & PAPER-VIII)

Name	Paper-VII (Organic)	Paper-VII (Inorganic)	Paper-VII (Total: F.M. 75)	Paper-VIII (Organic)	Paper-VIII (Physical)	Paper-VIII (Total: F.M. 75)
Anusree Debnath	4	26	30	17	15	32
Anita Ghosh	5	28	33	15	21	36
Subhojit Ghosh	8	26	34	10	6	16
Debopriya Sarkar	4	26	30	7	3	10
Aroj Ali Mallick	7	23	30	14	9	23
Jyoti Roy	3	16	19	15	15	30
Sayan Dutta	3	37	40	15	16	31
Pritam Debnath	7	15	22	5	11	16
Soumi Chatterjee	3	26	29	17	11	28

Mausumi Roychowdhury

Dr. Mausumi Roy Chowdhury

(Head, Department of Chemistry)

NABADWIP VIDYASAGAR COLLEGE

PATT- I TEST EXAM, 2018

CHEMISTRY (HONS) , PAPER- II

FULL MARKS-75, TIME- 4 HOURS Date-21. 04. 2018

Students should use separate answer sheets for different groups.

Gr - A (Ansrer any *five*) Marks 5x5=25

1.a) Which carbocation in the pair Meo-CH=CH-$CH_2^{\oplus}$ and CH_2= C-$CH_2^{\oplus}$-is more stable and why ? 3

b) Write the canonical forms of Me_2N-$C^{\oplus}$(Me)-OMe and indicate with reasons which one is the most contributing ? 2

2.a) Arrange the following compounds in order of increasing acid strength. Benzoic acid, 2- hydroxy benzoic acid, 4- hydroxy benzoic acid and 2,6- dihydroxy benzoic acid 2.5

b) Which compound of the pair butanal and 2- butenal has the higher dipole moment and why ? 2.5

3.a) Mention the state of hybridisation of carbon atoms and the number of σ and π in the compound CH_3CH=N-CH_2-C(=O)-OH 3

b) Which one is the better nucleophile ---- $-OH^-$ and $-OOH^-$, why ? 2

4.a) Discuss the outcome of reactions of triplet methylene with cis- 2-butene 3

b) Guanidine is much stronger base than urea. Explain 2

5. a) Explain what is meant by primary kinetic isotope effect ? 3

b) Addition of HCl to 1- butene and 2- butene involves the same intermediate but the reaction of 1- butene is faster than that of 2- butene, why ? 2

6. a) Give the mecanism of ozonolysis with supportive evidence . 3

b) what do you mean by Tautomerism ? 2

7.a) How does the bond polarity differ from bond polarisability ? Explain with suitable example. 3

b) Write down the product P in the reaction $F_3CCH=CH_2$-----HBr --------→ P 2

CLASS TEST – November 27, 2017

3rd year Hons

Subject : Organic Chemistry (Gr. A.)

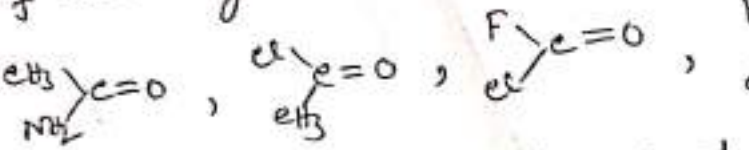
F. M. – 20

Answer to the following questions (any five) :– $5 \times 4 = 20$

1. Explain why infrared spectroscopy is called rotational and vibrational spectroscopy?

2. Cis 1,2-Dichloroethylene is IR active but its trans isomer is not — why?

3. Arrange the following carbonyl compounds in order of increasing carbonyl frequency?



4. Explain why i) ethanol is a good solvent for UV-measurement but not for IR

ii) glass cells are not used in UV spectroscopy?

5. What do you mean by chromophore and auxochrome?

6. The intensity of $\pi - \pi^*$ transitions is 10 to 100 times stronger than $n - \pi^*$ transitions – Explain.

7. A conjugated diene in hexane solution shows λ_{max} at 219 nm. What will happen if the solvent is changed to ethanol?

) ~~Spectrum~~? What is the most commonly used internal standard in NMR spectrum ~~and~~ and why?

2022

Internal Examination SEM VI Botany (Hons.) Paper _CC14(T) Full Marks: 10

Nabadwip Vidyasagar College

Each question carries 2 marks 5x2=10 (attempt any 5 question)

1. What is totipotency?
2. What is the difference between totipotency and pleuripotency?
3. Differentiate between de-differentiation and re-differentiation?
4. What is PCR?
5. What is vector?
6. What is YAC?

UG-H-BOT-DSE-T-04 (Research Methodology)

Organized by: Department of Botany, Nabadwip Vidyasagar College
Date of Assessment: 2nd August, 2021 (Monday), 11:00- 11:30 a.m.

* Required

1. Email *

_____

2. Full Name of the Student: *

_____

3. College Roll No. *

_____

4. Registration No. *

_____

Internal Assessment

1) All questions are compulsory
2) Each question carry 1 marks

5. Q. Cryopreservation is a type of _____ fixation. * 1 point

Mark only one oval.

- Physical
- Chemical
- Biological
- None of the above

6. Q. "2.09" can be expressed in terms of percentage as: * 1 point

Mark only one oval.

- 0.209 %
- 2.09 %
- 20.9 %
- 209 %

7. Q. A toxic substance produced by biological system is specially referred to as: * 1 point

Mark only one oval.

- Toxicant
- Toxin
- Xenobiotic
- Poison

2nd

Nabadwip Vidyasagar College
CBCS, SEM-1, 2nd Internal, F.M.: 10
Sub.: Botany, Paper: CC T-02, Time: 40 min.

Answer any five (5x2=10)

1. What is stele?

2. Name two chemicals found in cell wall?

3. Name a caryopsis fruit.

4. Which type of fruit is sunflower fruit?

5. Name a true fruit.

6. What do you mean by exarch nature of xylem? Give an example.

2024

7. Explain in brief apical cell theory?

8. What do you mean by cambium?

9. What do you mean by early wood?

10. Write down the function of plasmodesmata.

NVC Test Examination; B.Sc. Part II (H) 2019 Date: 22.02.2019

Sub.: Botany (H) Paper IV (38 Marks) & Paper V (37 Marks)

Full Marks: 75 Time: 4 Hours

Paper IV: Gr. A :Pteridophyte (Marks: 14)

1. Answer any two of the following: 2 x 2 = 4

a. What is webbing and recurvation ?

b. Why lepidodendron became extinct ?

c. What is rhizophore?

2. Answer any one of the following: 10 x 1 = 10

a. Write down the stellar pattern of *Lycopodium* with sketch?

b. Compare the stem anatomy of *Equisetum* and *Calamites*?

Paper IV: Gr. B: Gymnosperms and Progymnosperm (Marks: 12)

3. Answer any two of the following: 1x 2 = 2

a. What are the gymnospermic characters of *Gnetum*?

b. .Mention the two identifying characters of Pteridosperm?

c. What is plicate mesophyll?

4. Answer any two of the following: 2 x 2 = 4

a. what is sulphur shower?

b. Mention two xerophytic characters of *Cycas*?

c. Name one climber and one shrubby species of *Gnetum* ?

5. Answer any one of the following: 6 x 1 = 6

a. Compare the ovular structure of *Cycas* and *Pinus*?

b. Write down the evolutionary importance of progymnosperms?

Paper IV: Gr. C: Palaeobotany and Palynology (Marks: 12)

6. Answer any two of the following: 1x 2 = 2

a. What is micro fossil?

b. What is coal ball?

c. What is atreme?

7. Answer any two of the following: 2 x 2 = 4

a. What is compression?

b. Difference between carbonization and coalification?

c. What is amber?

8. Answer any one of the following: 6 x 1 = 6

a. Write down the process of petrification?

b. State the importance of melissopalynology?

Paper V: Gr. A :Systematics of Angiosperms (Marks: 24)

1. Answer any two of the following: 1x 2 = 2

a. What is taxon?

b. Write down the full form of ICN?

c. What is paleoherb?

2. Answer any three of the following: 2 x 3 = 6

a. What is isotype?

b. What is code and write down the importance of systematics?

c. Write down the name of family showing monadelphous stamen and draw the floral diagramme of that family?

d. Write down the full form of IUCN?

e. Write down the merits and demerits of a natural system of classification?

3. Answer any one of the following: 6 x 1 = 6

a. What is Botanical garden? Write down the functions of herbarium? (2 + 4)

b. What is the most advanced family among monocot? Describe the floral structure of that family

4. Answer any one of the following: 10 x 1 = 10

a. Write down the details of Bentham & Hookers' classification with merits and demerits?

b. Describe effective and valid publication? (5 + 5)

Paper V: Gr. B: Angiosperm Morphology and Embryology (Marks: 13)

5. Answer any three of the following: 1x 3 = 3

a. Draw sketch of axile placentation?

b. What is synandrous stamens?

c. What is cellular endosperm ?

d. what is the ultimate fate of embryo sac?

6. Answer any two of the following: 2 x 2 = 4

a. What ismicro and megasporogenesis?

b.Cite an example of petaloid sepal and sepaloid petal?

c. What is adhesion of stamen?

7. Answer any one of the following: 6 x 1 = 6

a. Write down the types of dry fruits ?

b. Write the different forms of corolla ?

NABADWIP VIDYASAGAR COLLEGE

Department of Botany

2nd Internal, 2019

Semester II Course: UG-H-BOT-CC-T-04 Time: 30 minutes Full Marks: 10

Answer any five 5 x 2 =10

1. What are ascomycota?
2. What do you mean by lichen?
3. What is phycobiont?
4. What is mycobiont?
5. What is endomycorrhizae?
6. Write down the characteristic features of mycorrhiza?
7. What is basidia?
8. Name one edible basidiomycota?
9. What is sterigmata?
10. Mention two roles of fungi in biotechnology?

Botany (H) Part- II Test Examination Result - 2019

Name	Marks in Paper IV+V (F.M. 75)
1. SOUMEN MONDAL	14
2. BIBHU MONDAL	10
3. SANGITA MONDAL	19
4. DITSA BHATTACHARYA	19
5. SUDIPTA BASAK	20
6. ANKITA DEY	18
7. ARINDAM KUNDU	53
8. KOYEL GHOSH	17
9. AGNIVA MUKHERJEE	16
10. RAHUL BISWAS	11
11. ALMIN SEKH	52
12. BIKRAM DAS	19
13. SAHIL MONDAL	13
14. MAHABUB ALAM MALLICK	29
15. SREYA BASU ROY CHOWDHURY	39

Sanbhudip Chakraborty
Dept. of Botany

2018

NABADWIP VIDYASAGAR COLLEGE

Department of Botany

1st Internal Assessment

Semester I Course: UG-H-BOT-CC-T-01 Time: 30 minutes Full Marks-10

1. Answer any four (4) from the following : 1X4=4

a. Name any monosaccharide.
b. Carbohydrates are polyhydroxy alchohol - why?
c. What is system?
d. What do you mean by an open system?
e. Mention any membrane bound organelle containing genetic material.
f. What do you mean by virusoid?
g. What is the full form of LUCA?

2. Answer any three (3) from the following : 2X3=6

a. Draw the structure of aldohexoses.
b. Name the carbohydrates used in DNA.
c. Describe the first law of thermodynamics.
d. Write down the minimum criteria be a cell.
e. Differentiate between a prokaryotic and a eukaryotic cell.

NABADWIP VIDYASAGAR COLLEGE

Department of Botany

1st Internal Assessment

Semester I Course: UG-H-BOT-CC-T-02 Time: 30 minutes Full Marks-10

1. Answer any four (4) from the following: 1X4=4

a. Name one palmately compound tri foliate leaf.
b. What is stipule?
c. What is seed?
d. Write down the function of pappus.
e. Mention the function of cambium.
f. What do you mean by meristematic tissue?
g. Mention the function of stomata.

2. Answer any three (3) from the following: 2X3=6

a. Draw a diagram of a typical simple leaf.
b. What are the types of leaves?
c. Write the mode of seed dispersal of these fruits: Coconut, Mango
d. Mention different types of xylem and phloem tissue.
e. Differentiate between diacytic and paracytic stomata.

NVC Test Examination B.Sc. PartIII (H) 2018

Sub:Botany(H) Paper –VII(55 marks) & Paper-IX (25 marks)

Full Marks: 80 Time:4 Hours

Group A: Plant Physiology (Marks: 30)

1. Answer any two of the following: 1x2=2

   a. What is R.Q.?
   b. Name one water soluble plant pigment.
   c. What is vernalization?
   d. Define osmosis.

2. Answer any three of the following: 2x3=6

   a. What do you mean by phloem sap?
   b. Name the organelles involved in photorespiration.
   c. What is Emerson effect?
   d. What is photorespiration?
   e. Mention two physiological roles of gibberellins.

3. Give a brief account of any two of the following: 6x2=12

   a. Cohesion-tension theory of ascent of sap
   b. Phloem loading and unloading
   c. Cylic and noncylic electron transport in photosynthesis

4. Answer any one of the following: 10x1=10

   a. Describe the role of auxin in: 5+5
      a. abscission of leaves and fruits
      b. induction in parthenocarpy
   b. Give a brief account of β-oxidation of fatty acids. 10
   c. What are the criteria of essentiality of elements? Write the role of magnesium and Iron in plant growth and development with their deficiency symptoms. 4 + (3+3)

Group B: Plant Biochemistry (Marks: 25)

5. Answer any three of the following: 1x3=3

a. What is H-bond?
b. What are apoenzymes?
c. What is pH ?
d. What is Vanderwals force?

6. Answer any three of the following: 2x3=6

a. Name and draw the structure of anon reducing disaccharide.
b. What is isozyme?
c. What is the first law of thermodynamics?
d. What is K_m?

7. Give a brief account of any one of the following: 6x1=6

a. Structure of protein
b. Facilitated diffusion

8. Answer any one of the following: 10x1=10

a. Give a brief account of different types of major lipids.
b. Uniport and symport in membrane transport

Group C: Plant Anatomy & Plant Breeding (Marks: 25)

9. Answer any three of the following: 1x3=3

a. What is protostele?
b. What is cambium?
c. Define male sterility.
d. Define arithmetic mean.
e. Define probability.

10. Answer any three of the following: 2x3=6

a. State two features of halophytes.
b. Differentiate between mass selection and pure line selection.
c. What is coefficient of variation?
d. What is the significance of introduction?

11. Answer any one of the following: 6x1=6

a. State the ontogeny of stomata
b. Write a short note on heterosis or back cross method
c. Write a short note on anomalous secondary growth in *Bignonia*

12. Answer any one of the following: 10x1=10

a. Root stem transition
b. Evolution of stele
c. Hybridization method

Botany (H) Part- III Test Examination Result - 2018

Name	Marks Obtained (F.M. 160)
1. SUCHANDRA PAL	52
2. ANKITA GHOSH	35
3. SUSMITA BHATTACHARYA	52
4. ABID HASSAN MANDAL	30
5. PRIYABRATA BISWAS	49
6. PRAJNA PRATIMA SAHA	17
7. SUMAN DEBNATH	52
8. MADHUMITA GHOSH	37
9. PALLABI DAS	38
10. SRIMATI BAG	38

Sambalpur University
Dept. of Botany

Department of Environmental Science

NabadwipVidyasagar College

Internal Assessment 2022

Semester VI

PAPER - UG-ENVS-H-CC-14

1. Sustainable building means that
   a. Green building
   b. Environmental building
   c. Both A and B

2. Which of the following is not the purpose of a green building
   a. To minimize damage of the environment
   b. Re-use of waste materials
   c. None of the above

3. Which of the following green rating systems are currently working in India?
   a. LEED
   b. GRIHA
   c. Both A and B

4. LEED means___
   a. Leadership in Energy and Environmental Design
   b. Leadership in Energy and Efficiency Document
   c. Leadership in Energy and Efficiency Design

5. LEED gives rating in form
   a. 1 star, 2 star, 3 star, 4 star, 5 star
   b. Platinum, Gold, Silver

c. None of above

6. GRIHA means that
   a. Green Rating for Indian Habital Assessment
   b. Green Rating for Integrated Habital Assessment
   c. Green Rating for International Habital Assessment

7. When GRIHA was launched in india
   a. 2008
   b. 2006
   c. 2010

8. When LEED was launched in india
   a. 1997
   b. 1998
   c. 2001

9. How many set of criteria formulated by GRIHA for rating the building?
   a. 34
   b. 33
   c. 31

10. Sustainable planning considers environmental, social, and_____ impacts of a building
   a. technological
   b. economical
   c. Both A and B

NabadwipVidyasagar College
Department of Environmental Science
Internal Assessment, 2022
Semester II, IV, VI
Result

Semester VI
Core Course: Core Course 13 (Code: UG-ENVS-H-CC-13) Environmental Legislation And Policy

Name of the student	Class Roll No.	Full Marks	Marks obtained
Barnali Sarkar	1	10	08
Parija Mukherjee	2	10	09
Poushali Saha	4	10	06
Shreya Basak	5	10	08
Mahendra Murmu	7	10	09

Semester VI
Core Course: CORECOURSE-14 (Code: UG-ENVS-H-CC-14) Urban Ecosystems

Name of the student	Class Roll No.	Full Marks	Marks obtained
Barnali Sarkar	1	10	07
Parija Mukherjee	2	10	08
Poushali Saha	4	10	06
Shreya Basak	5	10	08
Mahendra Murmu	7	10	09

Semester VI
Discipline Specific Elective 03 (Code: UG-ENVS-H-DSE-03b) Instrumental Techniques For Environmental Analysis

Name of the student	Class Roll No.	Full Marks	Marks obtained
Barnali Sarkar	1	10	09
Parija Mukherjee	2	10	09
Poushali Saha	4	10	07
Shreya Basak	5	10	08
Mahendra Murmu	7	10	09

Department of Environmental Science
Nabadwip Vidyasagar College
Nabadwip, Nadia- 741302

Semester IV
Core Course: Core Course 08 (Code: UG-ENVS-H-CC-08) Bio-Systematics And Biogeography

Name of the student	Class Roll No.	Full Marks	Marks obtained
Riya Biswas	4	10	08
Sangita Garai	5	10	06
Satavisha Mitra	6	10	09
Akash Sil	7	10	08
Arpan Ghosh	8	10	06
Ayan Saha	9	10	07
Nilanjan Das	13	10	AB
Rahul Singha	14	10	07
Soumya Dey	15	10	09

Semester IV
Core Course: Core Course 09 (Code: UG-ENVS-H-CC-09) Natural Resource Management And Sustainability

Name of the student	Class Roll No.	Full Marks	Marks obtained
Riya Biswas	4	10	07
Sangita Garai	5	10	06
Satavisha Mitra	6	10	08
Akash Sil	7	10	08
Arpan Ghosh	8	10	06
Ayan Saha	9	10	07
Nilanjan Das	13	10	AB
Rahul Singha	14	10	06
Soumya Dey	15	10	08

Semester IV
Core Course: Core Course 10 (Code: UG-ENVS-H-CC-10)Environmental Pollution And Human Health

Name of the student	Class Roll No.	Full Marks	Marks obtained
Riya Biswas	4	20	17
Sangita Garai	5	20	15
Satavisha Mitra	6	20	18

Department of Environmental Science
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Nabadwip, Nadia- 741302

Department of Environmental Science
NabadwipVidyasagar College
Internal Assessment 2021
SEMESTER V
Paper – DSE 1

F.M: (2X5=10); Time: 30 min

1. Itai – Itai disease caused by which heavy metal?

   a. Lead
   b. Cadmium
   c. Chromium
   d. Mercury

2. Which form of Mercury is absorbed and accumulates to a greater extent than other forms?

   a. Mercury Benzoate
   b. methylmercury
   c. Mercury Chloride
   d. ethylmercury

3. Blackfoot disease caused by which heavy metal?

   a. Lead
   b. Arsenic
   c. Cadmium
   d. Selenium

4. Minamata disease is caused by?

   a. mercury
   b. selenium
   c. arsenic
   d. lead

5. .....is cytotoxic and able to induce DNA damaging effects.

   a. Chromium (VI)
   b. Chromium (III)

NabadwipVidyasagar College
Department of Environmental Science
Internal Assessment, 2021
Semester I, III, V
Result

Semester V
Core Course: Core Course 11 (Code: Ug-Envs-H-Cc-11) Environmental Biotechnology

Name of the student	Class Roll No.	Full Marks	Marks obtained
Barnali Sarkar	1	10	09
Parija Mukherjee	2	10	09
Poushali Saha	4	10	07
Shreya Basak	5	10	08
Mahendra Murmu	7	10	09

Semester V
Core Course:CORECOURSE 12 (Code: UG-ENVS-H-CC-12) EVOLUTIONARY BIOLOGY

Name of the student	Class Roll No.	Full Marks	Marks obtained
Barnali Sarkar	1	20	16
Parija Mukherjee	2	20	18
Poushali Saha	4	20	13
Shreya Basak	5	20	18
Mahendra Murmu	7	20	18

Semester V
Discipline Specific Elective 01 (Code: UG-ENVS-H-DSE- 01b) Ecotoxicology And Environmental Health

Name of the student	Class Roll No.	Full Marks	Marks obtained
Barnali Sarkar	1	10	07
Parija Mukherjee	2	10	08
Poushali Saha	4	10	06
Shreya Basak	5	10	09
Mahendra Murmu	7	10	09

Semester V
Discipline Specific Elective 02 (Code: UG-ENVS-H-DSE-02b) Waste And Wastewater Management

Name of the student	Class Roll No.	Full Marks	Marks obtained
Barnali Sarkar	1	20	17
Parija Mukherjee	2	20	18

Department of Environmental Science
Nabadwip Vidyasagar College
Nabadwip, Nadia- 741302

Poushali Saha	4	20	14
Shreya Basak	5	20	17
Mahendra Murmu	7	20	18

Semester III
Core Course: CORE COURSE 5 (Code: UG-ENVS-H-CC-05) Ecology And Ecosystems

Name of the student	Class Roll No.	Full Marks	Marks obtained
Anirban Mitra	2	20	AB
Ankita Nath	3	20	15
Riya Biswas	4	20	17
Sangita Garai	5	20	15
Satavisha Mitra	6	20	18
Akash Sil	7	20	18
Arpan Ghosh	8	20	15
Ayan Saha	9	20	17
Nilanjan Das	13	20	15
Rahul Chakraborty	14	20	15
Rahul Singha	16	20	16
SoumyaDey	18	20	17

Semester III
Core Course: CORE COURSE 06 (Code: UG-ENVS-H-CC-06) Biodiversity And Conservation

Name of the student	Class Roll No.	Full Marks	Marks obtained
Anirban Mitra	2	10	AB
Ankita Nath	3	10	07
Riya Biswas	4	10	08
Sangita Garai	5	10	07
Satavisha Mitra	6	10	09
Akash Sil	7	10	08
Arpan Ghosh	8	10	06
Ayan Saha	9	10	07

Department of Environmental Science
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Nabadwip, Nadia- 741302

Nilanjan Das	13	10	06
Rahul Chakraborty	14	10	07
Rahul Singha	16	10	07
SoumyaDey	18	10	08

NABADWIP VIDYASAGAR COLLEGE
DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2020
Sem - III

Full Marks: 20
Paper: CC-6

1. Write a short note on RAPD, RFLP, AFLP; NCBI database.
2. Discuss ecosystem services of biodiversity.

NABADWIP VIDYASAGAR COLLEGE
DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2020
SEM - III

Full Marks: 20
Paper:CC-07

1. Write about different types of smog and their formation process.
2. Discuss effect of urbanization on micro climate.

NABADWIP VIDYASAGAR COLLEGE
DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2020
Sem - III

Full Marks: 20
Paper: SEC-01

1. Discuss aerial photography and imageinterpretation [10]
2. Write about applicationsof remote sensing in landuse mapping [10]

NABADWIP VIDYASAGAR COLLEGE
DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2021
Sem-IV

Full Marks: 20
Paper: CC-8

1. Write about principles and rules of Botanical and Zoological Nomenclature.
2. Describe types of speciation with diagram and example.

NABADWIP VIDYASAGAR COLLEGE
DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2019
SEM - III

Full Marks: 20
Paper: CC-5

1. Write about carbon cycle with proper diagram.
2. Write about ecological pyramids in different ecosystem.

NABADWIP VIDYASAGAR COLLEGE
DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2019
SEM - III

Full Marks: 20
Paper: CC-6

1. Write about special and temporal patterns of biodiversity.
2. Write about different conservational practices.

NABADWIP VIDYASAGAR COLLEGE
DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2019
SEM - III

Full Marks: 20
Paper: CC-7

1. Describe *El Nino* and *La Nina*with proper map diagram.
2. Brief about ozone layer depletion and causes.

NABADWIP VIDYASAGAR COLLEGE
DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2019
SEM - III

Full Marks: 20
Paper: CC-SEC1

1. Write about application of remote sensing in agricultural sectors.
2. Write about components of remote sensing with proper diagram.

NABADWIP VIDYASAGAR COLLEGE
DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2018
Part - II

Full Marks: 20
Paper: IV

1. Define dose in terms of environmental contaminants [1]
2. Discuss bioaccumulation and bio-magnification in terms of any environmental contaminant [10]
3. Give an account of arsenicosis in bengal [5]
4. What is bioassay method for toxicity determination [4]

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DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2019
Part - II

Full Marks: 20
Paper: V

1. Describe remote sensing principle [5]
2. Discuss the application of GIS [10]
3. What is RADAR [1]
4. How RS/GIS help in natural resource conservation? [4]

NABADWIP VIDYASAGAR COLLEGE
DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2018
Part – III

Full Marks: 20
Paper: VII

1. Discuss Cost-Benefit analysis [10]
2. Write a note on positive and negative externality [5]
3. Discuss the carbon trading [5]

NABADWIP VIDYASAGAR COLLEGE
DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2018
SEM - I

Full Marks: 20
Paper: CC-01

1. Discuss different theories of earth origin [10]
2. Discuss rock formation [10]

NABADWIP VIDYASAGAR COLLEGE
DEPARTMENT OF ENVIRONMENTAL SCIENCE
INTERNAL EXAMINATION 2018
SEM - I

Full Marks: 20
Paper: CC-02

1. Discuss the rules of thermodynamics [10]
2. Discuss composition of atmosphere [10]

B.A/ B. Sc. Honours Semester-IV Internal Examination, 2022

Department of the Geography

Nabadwip Vidyasagar College
Nabadwip, Nadia, 741302

Paper-GEO/H/CC/T/10

Full Marks: 10
Time: 40Mins

Answer any five following questions **2*5=10**

a) Write two prominent factors regarding air pollution.
b) Differentiate pollution from degradation.
c) Write down two aims of Montreal protocol.
d) What is the conceptual background of Earth Summit?
e) What is agenda 21?
f) Write down two environmental issues due to agriculture.
g) Write down urban environmental issues related to waste management.
h) Discuss functions of ecosystem in brief.

B.A/ B. Sc. Honours Semester-IV Internal Examination, 2022

Department of the Geography

Nabadwip Vidyasagar College
Nabadwip, Nadia, 741302

Paper-GEO/H/CC/T/10

Full Marks: 10
Time: 40Mins

Answer any five following questions **2*5=10**

a) Write two prominent factors regarding air pollution.
b) Differentiate pollution from degradation.
c) Write down two aims of Montreal protocol.
d) What is the conceptual background of Earth Summit?
e) What is agenda 21?
f) Write down two environmental issues due to agriculture.
g) Write down urban environmental issues related to waste management.
h) Discuss functions of ecosystem in brief.

B.A/B.Sc. Semester-IV Internal Examination, 2022

Department of Geography

Nabadwip Vidyasagar College
Nabadwip, Nadia, 741302

NAME	REGISTRATION NO.	ROLL NO.	GEO/H/CC/T/08	GEO/H/CC/T/09	GEO/H/CC/T/10	GEO/H/SEC/P/02/B
ASRAFUL SEKH	23415	3114126 - 2025973	8	7	9	8
RITWIK DAS	23417	3114126 - 2026056	9	8	9	9
SAHID AHMED	23418	3114126 –2026066	8	8	7	7
SRABON PAUL	23419		ABSENT	ABSENT	ABSENT	ABSENT
ANINDITA GHOSH	26242	2114126 - 2026137	9	8	9	8
ANKITA DEBNATH	26243	2114126 –2026140	8	7	8	7
ARUNIMA PODDAR	26244	2114126 –2026149	8	6	7	6
BRISTI NANDI	26245	2114126 - 2026156	7	8	8	9
ISHA BISWAS	26246	2114126 –2026165	8	9	9	8
ISHIKA ROY	26247	2114126 –2026167	9	7	8	8
JAYASHRI ROY	26248	2114126-2026169	9	10	8	10
LIJA GHOSH	26249	2114126 – 2026174	8	8	7	8
MEGHA PAL	26250	2113126 – 2026177	9	8	8	9
RAKHI DAS	26251	2114126 – 2026192	7	7	8	8
SANGITA HALDAR	26252	2114126 - 2026209	7	9	8	8
SUMANA PAL	26253	2114126 - 2026221	8	8	9	9
SUTAPA BASAK	26254	2114126 - 2026223	7	8	8	9
TUYA KUNDU	26256	2114126 – 2026230	8	9	8	9
AYAN PATHAK	26257	2114126 - 2026252	9	8	9	10
NURUDDIN SEIKH	26258	2114126 – 2026295	8	7	7	8

H.O.D
Department of Geography
Nabadwip Vidyasagar College
Nabadwip, Nadia- 741302

Semester-II Honours Internal Examination, 2021

Nabadwip Vidyasagar College
Department of Geography
Nabadwip Nadia, 741302

Paper: CC-04 Full Marks: 10

1. Convert the following whole circle bearing to reduced bearing: ½*4=2

Whole Circle Bearing	Reduced Bearing
266°	
187°	
288°	
332°	

2. Convert the following reduced circle bearing to whole circle bearing: ½*4=2

Reduced Circle Bearing	Whole Circle Bearing
S87°W	
N78°W	
N15°E	
S45°E	

3. Calculate the back bearing of the following: ½*4=2

Line	Fore Bearing	Back Bearing
PQ	89°	
QR	225°	
RS	315°	
SP	56°	

4. Calculate the fore bearing of the following: ½*4=2

Line	Fore Bearing	Back Bearing
PQ		187°
QR		15°
RS		223°
SP		181°

5. Differentiate bearing from azimuth in surveying. 2

B.A/B.Sc. Semester-IV Internal Examination, 2021

Department of Geography

Nabadwip Vidyasagar College
Nabadwip, Nadia, 741302

Name of the Student	Registration Number	Roll No.	GEO/H/CC/T/08 (Full Marks-10)	GEO/H/CC/T/09 (Full Marks-10)	GEO/H/CC/T/10 (Full Marks-10)	GEO/H/SEC/P/02/B (Full Marks-10)
Antara Dey	024620	2114126-1924701	8	9	8	10
Baishakhi Debnath	024621	2114126-1924706	9	8	9	9
Madhumita Das	024622	2114126-1924716	8	8	9	9
Piu Mondal	021961	3114126-1924269	9	8	9	10
Sahana Khatun	021962	3114126-1924370	8	7	8	9
Sangita Paul	021963	3114126-1924380	9	9	9	10
Sonali Murmu	021964	3114126-1924431	8	8	8	9
Trisha Basak	024623	2114126-1924748	10	10	9	10
Kalyan Bairagi	021965	3114126-1924575	8	8	8	9
Kaushik Chandra Pal	024624	2114126-1924786	8	8	9	9
Md Omar Mondal	021966	3114126-1924584	7	8	7	9
Rajesh Tapadar	021967	3114126-1924614	8	8	8	10
Ritwik Mondal	021968	3114126-1924624	10	9	9	10
Subhal Chandra Das	024626	2114126-1924839	9	8	9	9
Tanmoy Poddar	021969	3114126-1924692	8	9	9	10
Tushar Kumar Sarkar	021970	3114126-1924696	8	9	8	10
Falguni Mondal	076908	3114126-1976913	8	9	9	9
Jahangeer Mondal	076909	3114126-1976923	7	8	8	9

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Department of Geography
Nabadwip Vidyasagar College
Nabadwip, Nadia- 741302

Sem-IV, Honours Internal Examination, 2021

Paper- CC-08
Full Marks- 10

* Required

1. Email *

2. Name *

3. 1. Who added population concept in the growth pole theory *

Mark only one oval.

- Perroux
- Baudeville
- Schumnpeter
- R.P.Mishra

4. 2. Which is not related to R. P. Mishra's growth foci model *

Mark only one oval.

- Core and periphery theory
- Spatial diffusion model
- Von Thunen model
- Central place theory

Nabadwip Vidyasagar College

B.A / B.Sc. Semester-I, 1st Internal Assessment Examination, 2019

Sub: Geography (Hons.) Full Marks: 10

Paper: GEO/H/CC/T/01 Time: 40 Minutes

Answer any five of the following: **2×5 = 10**

1. What do you mean by 'Triple Junction' ?
2. Distinguish between symmetrical fold and asymmetrical fold.
3. What is discontinuity line? Describe with example .
4. What is 'River Capture'?
5. What do you mean by 'Trio Factor' of Davis?
6. What is hanging valley?
7. What do you mean by 'Level of Compensation'?
8. Describe trellis drainage pattern.

Nabadwip Vidyasagar College

B.A / B.Sc. Semester-I, 1st Internal Assessment Examination, 2019

Sub: Geography (Hons.) Full Marks: 10

Paper: GEO/H/CC/T/02 Time: 40 Minutes

Answer any five questions of the following: **5×2 = 10**

1. Discuss any two components of a map.
2. Mention the characteristics of the following (any two):
   i. Sandstone
   ii. Basalt
   iii. Quartzite
   iv. Marble
3. What will be the next map no. in their East direction –
   I. 73B/4
   II. 64O/10
4. Mention two physical and two cultural features of topographical map.
5. Which datum and projection is used to OSM?
6. What is the R.F of Million Sheet and how many international toposheet numbers in the world ?
7. What is large scale map?

B.A/B.Sc. Semester-I Internal Examination, 2019

Department of Geography

Nabadwip Vidyasagar College
Nabadwip, Nadia, 741302

Name	Registration Number	Roll No.	GEO/H/CC/T/01 (Full Marks-10)	GEO/H/CC/T/02 (Full Marks-10)
Antara Dey	024620	2111126-1924701	8	10
Baishakhi Debnath	024621	2111126-1924706	9	9
Madhumita Das	024622	2111126-1924716	8	9
Piu Mondal	021961	3111126-1924269	9	10
Sahana Khatun	021962	3111126-1924370	8	9
Sangita Paul	021963	3111126-1924380	9	10
Sonali Murmu	021964	3111126-1924431	8	9
Trisha Basak	024623	2111126-1924748	10	10
Kalyan Bairagi	021965	3111126-1924575	8	9
Kaushik Chandra Pal	024624	2111126-1924786	8	9
Md Omar Mondal	021966	3111126-1924584	7	9
Rajesh Tapadar	021967	3111126-1924614	8	10
Ritwik Mondal	021968	3111126-1924624	10	10
Subhal Chandra Das	024626	2111126-1924839	9	9
Tanmoy Poddar	021969	3111126-1924692	8	10
Tushar Kumar Sarkar	021970	3111126-1924696	8	10
Falguni Mondal	076908	3111126-1976913	8	9
Jahangeer Mondal	076909	3111126-1976923	7	9
Samrat Pal	024626	2111126-1924820	9	8

H.O.D
Department of Geography
Nabadwip Vidyasagar College
Nabadwip, Nadia- 741302

B.A/B.Sc. Semester-I Internal Examination, 2019

Department of Geography

Nabadwip Vidyasagar College
Nabadwip, Nadia, 741302

NAME OF THE STUDENTS	REGISTRATION NO(2021-22)	ROLL NO	GEO/H/CC/T/03 (Full Marks-10)	GEO/H/CC/T/04 (Full Marks-10)
BIPASHA DEY	029426	2111126-2125221	9	10
DEBI SAHA	029427	2111126-2125225	10	10
DONA DEBNATH	029428	2111126-2125229	9	9
KOYEL SAHA	029429	2111126-2125236	10	9
LABONI BISWAS	029430	2111126-2125238	10	9
MANTI DAS	029431	2111126-2125240	10	10
PRIYA DHARA	029432	2111126-2125252	9	8
RAJIYA KHATUN	029433	2111126-2125255	10	10
RESHMI KHATUN	029434	2111126-2125256	10	9
SABNAM KHATUN	029435	2111126-2125261	10	8
SNEHA PRAMANIK	029436	2111126-2125272	9	10
ABHIK SAHA	029437	2111126-2125289	9	8
ARDHENDU HALDAR	029438	2111126-2125301	8	10
BIKRAM MANNA	029439	2111126-2125314	10	9
DEBAM SARKAR	029440	2111126-2125318	9	9
DEBASISH RAJBANSHI	029441	2111126-2125321	9	10
DIPANKAR KUMAR MODAK	029442	2111126-2125327	9	8
JOYDEB KUNDU	029443	2111126-2125335	10	10
RAJU SEKH	029444	2111126-2125367	10	10
RAKESH BISWAS	029445	2111126-2125369	10	9
SUBHAJIT MAJUMDAR	029447	2111126-2125396	8	9
SNEHASHIS GHOSH	029448	2111126-2125398	9	10
DEBASMITA SEN	025967	3111126-2125489	9	8
SAMPA BISWAS	025968	3111126-2125741	10	8
SRIJITA SAHA	025969	3111126-2125805	8	9
SWARNALI NADI	025970	3111126-2125838	9	9
MOMIN MOLLAH	025972	3111126-2125923	9	10
PRADIPTA DEBNATH	025973	3111126-2125931	10	9
SK ABIR ALI	025974	3111126-2125986	9	9
SWARUP GHOSH	025975	3111126-2126023	8	10

H.O.D
Department of Geography
Nabadwip Vidyasagar College
Nabadwip, Nadia- 741302

Internal Assessment 2022 (CC06)

CC06 (Thermal Physics)

* Required

1. Email *

2. Name *

3. Roll No. *

4. Registration No. *

Online Mode

Nabadwip Vidyasagar College

Internal Assessment-2022

B.Sc. Physics (Honours) Semester –III

Paper: CC 06

Time: 30 minutes | Full marks: 10

All the questions are compulsory: | 1×10=10

5. 1.

Q1. Which system exchanges neither matter nor energy with surroundings?

Option 1: Isolated system | Option 2: Closed system | Option 3: Open system

Mark only one oval.

- Option 1
- Option 2
- Option 3

SEM4-PHYH-SEC2 [2021]

sudipta@nvc.ac.in Switch account

* Required

Email *

Your email

Name *

Your answer

Registration No. *

Your answer

The non-renewable source is

- ○ solar energy
- ○ wind energy
- ○ fossil fuels
- ○ tidal energy

The radiation energy of the Sun is due to

- electrostatic reaction
- thermonuclear reaction
- gravitational reaction
- none of these

Which energy of wind is converted into electrical energy?

- Kinetic energy
- Potential energy
- Kinetic and potential energy
- none of these

Which of the statements is correct about Solar Energy?

- It is a renewable and conventional source of energy
- It is a non-renewable and non-conventional source of energy
- It is a renewable and non-conventional source of energy
- It is a non-renewable source of energy

Nabadwip Vidyasagar College

B.Sc. Honours Core Course Internal Assessment 2020

Semester - IV

Subject: Physics Paper – PHY-H-CC-T-10 Full Marks – 10

Answer *any one* question: $10 \times 1 = 10$

1. Explain why a semiconductor behaves as an insulator at 0K. Why does the conductivity of a semiconductor increase with temperature while that of a metal decrease with temperature? Draw the energy band diagram of a p-type semiconductor. What is a hole? How does it move through a semiconductor crystal?

   [2+3+2+1+2]

2. "A donor level is situated within the band gap and close to the conduction band of an n-type semiconductor"- explain. What is mobility? Establish a relation between conductivity and mobility in an extrinsic semiconductor containing both electrons and holes.

   [3+1+6]

N.B.: Examinees are requested to send the soft copy of the answer script through email within the stipulated date. Email: pmandalnvc@gmail.com

Nabadwip Vidyasagar College
B.Sc. Program Course Internal Assessment 2020
Department of Physics
Paper – (PHY-H-SEC-T-02) Semester – IV F.M. – 10

Answer any *one* from the followings

1. Explain in brief (any five). **[5 X 2 = 10]**
a) Tidal Energy d) Photo Thermal Conversion
b) Solar Energy e) Solar Radiation
c) Solar Cooker f) Commercial & Non-commercial energy sources

2. a) Explain Geothermal energy & its resources. **[4]**
b) State some limitations in the use of nuclear energy. **[3]**
c) How do you get energy from Ocean bio-mass? **[3]**

Nabadwip Vidyasagar College

2nd Internal Assessment – 2019

B.Sc. Physics (Honours & Programme) Semester - III

Paper – SEC (Computational Physics Skills) I

Full Marks = 10 **Duration = 45 Minutes**

Answer *any two* questions: **5 x 2 = 10**

1. Write a fortran program to get Fibonacci Series. **5**
2. Write a fortran program to print out all natural even and odd number between 1 and 1000. **5**
3. Write a fortran program to calculate Euler number using exp(x) evaluated at x = 1. **5**
4. Write down an input Gnuplot file to plot the following functions simultaneously for $-10 \leq x \geq 10$ with proper title & labels and to save the final figure as an eps file. **5**
   $f(x) = \sin(x)/x$ & $g(x) = (\sin(x))^3/x$

Nabadwip Vidyasagar College

B.Sc. (General)

Semester – I

1st Internal Assessment – 2019

Subject: Physics (General); Paper: PCC-1A

FM-10

Time: 40 Minutes

Answer any five questions: **2 × 5 = 10**

1. গ্রহের গতি সংক্রান্ত কেপলারের সূত্রগুলি লেখা। (2)

2. বস্তু-সংস্থার মহাকর্ষীয় স্থিতিশক্তি বলতে কি বোঝো? m_1 ও m_2 দুটি বিন্দু-ভর দ্বারা গঠিত বস্তু সংস্থার মহাকর্ষীয় স্থিতিশক্তি কত হবে? (1+1)

3. হ্রাসপ্রাপ্ত ভর (reduced mass) কাকে বলে? (2)

4. স্থিতিস্থাপক শক্তিঘনত্ব কাকে বলে? কোনো বস্তুর একক আয়তন বিকৃতির জন্য কৃতকার্যের পরিমান কত হয়? (1+1)

5. আয়তন বিকৃতি গুণাঙ্কের সংজ্ঞা লেখো। (2)

6. সরল দোলগতি কাকে বলে? সরল দোলগতি সম্পন্ন কণার বল সমীকরণটি লেখ। (1+1)

7. একটি সরল দোলগতির সমীকরণ $x = A\sin(\omega t + \alpha)$, । সমীকরণে প্রত্যেকটি রাশির নাম উল্লেখ কর। (2)

Nabadwip Vidyasagar College

Test Examination – 2018

B.Sc. Physics (Honours) Part - I

Paper – I

Full Marks = 75 **Time = 4 Hours**

Group - A

Answer *any three* questions: 5 x 3 = 15

1. a) State Gauss's divergence theorem.
   b) Prove that $\nabla^2(\frac{1}{r}) = 0$ where $r = \sqrt{x^2 + y^2 + z^2}$. [2 + 3]
2. a) Prove that the diagonals of a parallelogram bisect each other.
   c) Check whether the electric field $\vec{E} = axy^2(y\hat{i} + x\hat{j})$ is conservative or not? [3 + 2]
3. Express $f(x) = |x|$ in Fourier series for $-n < x < n$ [5]
4. Find the eigen values and normalized eigen vectors of the matrix $A = \begin{bmatrix} 1 & 1 & 0 \\ 1 & 0 & 1 \\ 0 & 1 & 1 \end{bmatrix}$ [5]
5. Solve the differential equation $\frac{d^2y}{dx^2} - 5\frac{dy}{dx} + 6y = xe^x$ [5]

Group – B

Answer *any five* questions: 6 x 5 = 30

1. Write down the cartesian coordinates (x,y,z) in terms of spherical polar coordinates (r,θ,φ) . The polar coordinates of a particle moving in a plane are given by r = a $\sin\omega_1 t$ and θ = $\omega_2 t$. Obtain expressions for the polar coordinates of the velocity and acceleration of the particle. [2 + 4]
2. What is an inertial frame? Show that Newton's second law is form-invariant under Galilean transformation. [2 + 4]
3. Define the term 'angular momentum'. Is it a scalar or vector quantity? Show that torque $\vec{\Gamma} = \frac{d\vec{L}}{dt} = \vec{r} \times \vec{F}$ [1 + 1 + 4]
4. Define the time integral and the line integral of a force. Prove that $\vec{F} = r^2\hat{r}$ is conservative and find the corresponding scalar potential. [1+ 1 + 4]
5. Define the centre of mass of a system of particles. Prove that total kinetic energy of a system of particles is equal to the kinetic energy of the centre of mass plus the kinetic energy of the particles with respect to the centre of mass. [2 + 4]

Nabadwip Vidyasagar College

Test Examination-2018

Sub: Physics (Hons.) Part-III

Time: 2 hrs | Paper-VIII | F.M. 40

Group-A

Answer any four questions: $4 \times 5 = 20$

1. Define virtual displacement. Show that virtual work done by holonomic constraint forces is zero. [2+3]

2. What are constraints? On what basis are they classified? Name the different classes of constraints with proper example in each. [1+4]

3. Two particles are to be distributed in two non-degenerate states. Find the number of distributions according to MB, BE and FD statistics. Show the distribution diagrammatically. [3+2]

4. An electron falls through a potential difference of 100 v. Calculate momentum of the electron & the wavelength of the wave associated with the electron in motion. [3+2]

5. Verify that $\hat{Q} = \frac{1}{2}(\hat{x}\hat{p}_x + \hat{p}_x\hat{x})$ is a Hermitian operator. [5]

Group-B

Answer any two questions: $10 \times 2 = 20$

6. (a) State D'Alembert's Principle.
   (b) Establish Lagrange's equation from D'Alembert's Principle for a conservative, holonomic system.
   (c) A simple pendulum hangs from the ceiling of an elevator which is moving down with a constant acceleration f. Obtain the Hamiltonian and hence the equation of motion of the simple pendulum. [2+5+3]

7. (a) A system containing two spin $\frac{1}{2}$ particles, stationary in space, is placed in an external magnetic field $\vec{B}$. Each particle has a magnetic moment $\vec{\mu}$ which can be aligned parallel or anti-parallel to $\vec{B}$. What is the possible microstates and macrostates of the system?
   (b) A system has two non-degenerate energy levels $E_1 = 0$ and $E_2 = 0.1\ eV$. What is the temperature at which the probability of the system occupying the higher energy level is 0.25? [6+4]

8. (a) Write down the time dependent Schrodinger equation and then obtain the time independent equation.
   (b) What are the stationary states?
   (c) Calculate the normalization constant for a wave function given by (t=0)
   $\psi(x) = A\,exp(-\sigma^2 x^2/2)exp(ikx)$, and mention the nature of the wave function. [1+3+2+3+1]

Nabadwip Vidyasagar College Internal exam 2022 SEM IV H: CC 8: COMP ANATOMY FEATHER, HORN, CLAW, NAIL

* Required

1. Email *

_____

2. Hair feathers on birds are * 1 point

Mark only one oval.

- ◯ plumule
- ◯ filoplume
- ◯ rectrices
- ◯ remiges

3. flight feathers on wing are * 1 point

Mark only one oval.

- ◯ plumule
- ◯ filoplume
- ◯ rectrices
- ◯ remiges

Nabadwip Vidyasagar College Internal exam 2021 SEM V H: DSE T 01: FISH AND FISHERY

nirmalya@nvc.ac.in Switch account

* Required

Email *

Your email

NAME and SEMESTER *

Your answer

email *

Your answer

univ regn no. with session *

Your answer

Request edit access

Placoid sale is found in * 1 point

- Rohu
- Catla
- Shark
- Mrigal
- Option 5

Trap nets used for fishing in * 1 point

- Deep water
- Tidal water
- Shallow water
- none of these

Chunti jal can be operated by * 1 point

- 2 men
- 3 men
- 4 men
- 6 men

Nabadwip Vidyasagar College
Internal Examination 2020
Part III: Zoology (Hons)
Full Marks : 16

Paper: VIII (Theory)

Answer all the questions 8X2=16

1. Replication moves from
   (a) 5' - 3' direction
   (b) 3' - 5' direction
   (c) 5' - 5 ' direction
   (d) 3' - 3 ' direction

   Ans: (a)

2. What is the role of gyrase in DNA replication
   (a) To separate the two template strands of DNA at each replication fork.
   (b) To relax or prevent supercoiling of the double helix.
   (c) To synthesize a short RNA primer for each new DNA strand.
   (d) To protect single stranded regions of DNA from damage.

   Ans: (b)

3. What is 'central dogma'?
   (a) Genetic information flows from RNA to DNA to protein
   (b) Genetic information flows from RNA to protein to DNA.
   (c) Genetic information flows from DNA to RNA to protein.
   (d) Genetic information flows from DNA to protein to RNA.

   Ans : (C)

4. A genetic unit that codes amino acid sequence of a complete functional polypeptide could termed as
   (a) Recon
   (b) Cistron
   (c) Intron
   (d) Exon
   Ans : (b)
5. Linked genes
   (a) Are located near each other on the same chromosome.
   (b) Violate the law of independent assortment.
   (c) Segregate together during meiosis.
   (d) All of the above.

   Ans: (d)
6. RFLP (Restriction Fragment Length polymorphism) study is a technique for
   (a) DNA finger printing.

(b) Transferring genes from unrelated species.
(c) Isolating single genes.
(d) Isolating single gene products.

Ans: (a)

7. Blocking action of enzyme through blocking its active site is known as
   (a) Allosteric inhibition
   (b) Feedback inhibition
   (c) Competitive inhibition
   (d) Non- competitive inhibition.

   Ans: (c)

8. The PCR is used to
   (a) Amplify a small amount of DNA.
   (b) Cleavage bacterial plasmids.
   (c) Seal sticky ends.
   (d) Identify target plasmid.

   Ans: (a)

NABADWIP VIDYASAGAR COLLEGE

II nd INTERNAL ASSESSMENTSEM III (HONS): ZOOLOGY

2019-2020

Paper: CC 1

5x 2

A. Answer in short (any 5)

1. Distinguish fringing and barrier reef
2. Define Darwin Dana subsidience theory.
3. Define coenosarcs and perisarc
4. Name and describe the free swimming larval form of *Fasciola* that infects snail.
5. How temperature influence growth of a coral
6. Give scientific name of one solitary and one colonial coral
7. What are hermatypic corals?

NABADWIP VIDYASAGAR COLLEGE
ZOOLOGY TEST EXAMINATION, 2019-2020
PART III HONS (Paper VII and Paper VIII unit I and II)

Date: 28.02.2020 FM: 75, Time: 3hr

Q.A: Answer any five (5x1) = 5

1. What is DDBJ?
2. What is monoclonal ab?
3. What is Shine Delgarno sequence?
4. What is alternative splicing?
5. Define cistron.
6. What is 5BU?
7. What is Sxl gene & its role?
8. Define central tendency.
9. What is PKU?

Q.B: Answer any 6 (6 x 2)= 12

1. What are adjuvants – what is their role?
2. What is ANOVA?
3. What is A and P site of ribosome?
4. What is SOS repair of DNA?
5. Distinguish transition & tranversion.
6. Define criss-cross inheritance with an example.
7. What are transposons?
8. What is RNA diting?
9. What is agglutination? Give example
10. Structure of DNA pol III.

Q.C Answer any three (3 x 6)= 18

1. a) Distinguish the cell wall structure of Gram +ve & Gram –ve bacteria with diagram. (4)

   b) Define the process of Gram staining. (2)

2. a)Distinguish HMI & CMI. (4)
   b) Define the properties of an ag . (2)

3. On crossing F1 flies, the F2 generation gave the following phenotypes. (6)

   Red straight=339, Purple straight=632
   curved=725, Purple curved=384

   Test whether the genetic theory is compatible with Mendelian 9:3:3:1 distribution.

[Given χ^2 .05(3) = 7.82]

3. a) What is Thalassemia? Describe the types of -thalassemia with its genetic causes & symptoms. (4)
   b) Give the cause & symptoms of cri-du-chat. (2)

5. What is recombination and its significance? Draw and describe Holliday model of recombination (1+5)

Q.D: Answer any four (10 x 4)= 40

1. a. What is NCBI? What is PDB? How to retrieve an information from a database?
   b. Describe the salient features of Swiss Prot. (2+1+4+3=10)

2. a. Describe the basic structure of Trp operon with diagram. (5)
   b. Describe epigenesis. (5)

3. a. Describe the different normal flora of man in skin & GI tract & their protective role. (4)
   b. What is Clb chromosome? How is it used to detect mutation in Drosophila? (6)

4. Describe the structure of lac operon .What do you mean by positive control of the operon? How dose lac operon differ from Trp operon? (4+1+2+3=10)

5. a. Describe the post transcriptional processing of eukaryotic mRNA & role of spliceosome in it. (8)
   b. Define non disjunction? (2)

6. a. write a short note on application of microbiology in environment and agriculture. (6)
   b. Describe primary ag-ab interaction, affinity & avidity. (4)

Test examination 2017-2018

Zoology Honours (Part III)

Nabadwip Vidyasagar College

Nabadwip,Nadia

Paper VII

DATE: .01.2018

Full Marks : 55 (in addition to paper VIII) **Time: 4 Hours(in addition to paper VIII)**

1. Answer any two of the following 1X2 = 2
   A) MS-DOS – what does it mean?
   B) Define text file. Give example?
   C) Give full definition of stick lac.
   D) What is Batesian mimicry?

2. Answer any six of the following 2X6 = 12
   A) What do you mean by system software?
   B) What are the uses of lacs?
   C) What Hardy-Weinberg principle states?
   D) State the symptoms when brood lac to cut.
   E) What is conscious mimicry? Cite example.
   F) Mention the place and time of origin of man.
   G) Write down the symptoms Ranikhet disease of fowl.
   H) Why isolation is considered to be one of the most important factors responsible for evolution.

3. Answer any three questions: 3X7 = 21
   A) Define natural selection as proposed by Darwin. The concept of fitness is central to natural selection – Discuss. 2+5= 7
   B) Find the median of the following data.

Class Boundaries	11-20	21-30	31-40	41-50	51-60	61-70	71-80
Frequency	42	38	125	84	45	36	30

   C) What is beekeeping? Write down the structure of a bee colony. 2+5= 7
   D) What is a natural pearl? How is it produced? Write how mollusk creates pearls. 1+2+4 = 7
   E) State the types of file organization. How do you organize files using libraries. 3+4= 7

4. Answer any two of the following. 10X2= 20

A) How do mimicry and camouflage contrast? Using classical model of butterfly explain the phenomenon of Müllerian mimicry. State the adaptative value of biological colouration. 3+4+3= 10

B) What is student t-test?

C) The body weight of 10 fishes (*Labeo rohita*) of different ponds is given below:

	1	2	3	4	5	6	7	8	9	10
Pond A	85	75	70	90	80	75	80	80	90	85
Pond B	55	75	80	65	60	70	70	55	60	80

Find if there is significant difference between the mean body weights of the above mentioned groups of fishes.

t scores: $t_{0.05(0.9)}$- 2.093, $t_{0.05}$ (18)= 2.101, $t_{0.05(20)}$= 2.086, $t_{0.05(17)}$ = 2.110. 2+8=10