



Department of Zoology

Skill Component Report

Department of zoology successfully Organised guest lecture on **“Introduction to Bioinformatics and Molecular Biology Techniques”** through online session on 29th July 2021(Educational Year -2020-2021) for T.Y. B.Sc. & M.Sc. –I Students. In that Session student gain knowledge about basic concept of bioinformatics and molecular biology and also understand about the practical techniques like BLAST, FASTA , Bioinformatics web resource (NCBI, EBI, ExPASy, PubMed, OMIA), Applications of Bioinformatics as well as analyses protein on native PAGE and SDS-polyacrylamide gel electrophoresis

Guest Name:- Mr. Ashish S. Wani sir (Department of Biotechnology, New A.C.S. college Ahmednagar.



 **Shri Neminath Jain Bramhacharyashram's**
Karmavir K.H. Abad Arts, Shriman M.G. Lodha Commerce and Shriman P. H. Jain
Science College, Chandwad 423 101 Dist- Nashik
Re-accredited by NAAC with B** Grade 

Online Guest Lecture
Organized by
Department of Zoology

Thursday: 29th July 2021 at 01:00 pm. On

“Introduction to Bioinformatics”

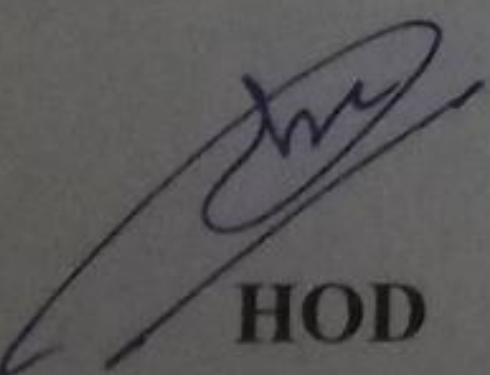
Chief Guest
Mr. Ashish S. Wani
Department of Biotechnology
New Arts, Commerce and
Science College, Ahmednagar

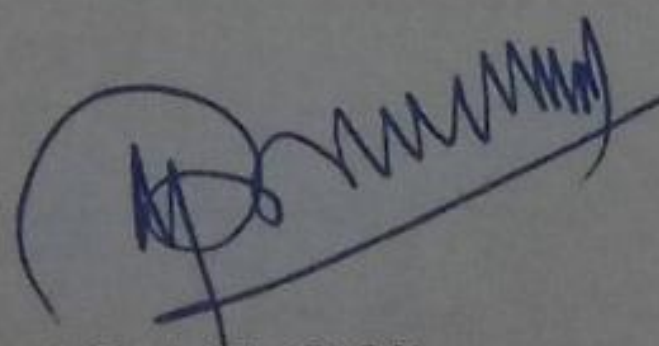
Dr. Sudin S. Dalave
I/C Head
Department of Zoology

Dr. Gotan H. Jain
Principal

Zoom Meeting ID: 71786008461 Passcode: zoology

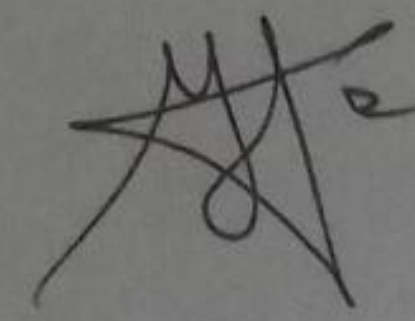

HOD

Dr. S. C. Dalave



IQAC Officer

Dr. M.T. Patil



Principal

Dr. G.H. Jain

Student Attendance

Sr. No.	Name of the Students
1	AHER DIPALI.
2	AHIRE ABHI.
3	AHIRE PALLAVI.
4	BIDGAR SANGITA.
5	GANGURDE VALMIK.
6	GHADGE VAIBHAV.
7	JADHAV MANISHA.
8	JADHAV MOHINI.
9	JAMDAR SAGAR.
10	KHAIRNAR SUDARSHAN.
11	KSHIRSAGAR MADHURI.
12	MHASKE PRATIKSHA.
13	MORE CHANCHAL.
14	PAGAR AKSHAY.
15	PAGAR VISHAKHA.
16	PARKHE KALYANI.
17	PATEL ISHRAT.
18	PATHAN, MUSKAN.
19	RAYATE HARSHALI.
20	SHINDE KUNAL.
21	SHINDE PRIYANKA.
22	SONAWNE UJJWALA.
23	WAGHCHOURE AARTI.
24	DIVATE NEHA SANJAY
25	FAIZA FARHAT HAMDANI PARVEZ AKHTER
26	GHORPADE SNEHAL VISHVANATH
27	SHINDE ASHISH PRADIP
28	SHINDE DIKSHA DILIP
29	SHINDE SAKSHI RAOSAHEB
30	THOKE NILIMA SOMNATH
31	THOMBRE VAISHALI GORAKH
32	TIDKE POOJA SHIVAJI
33	
34	
35	



27/11/1928

**S.N.J.B.'s K.K.H. Abad Arts, S.M.G. Lodha Commerce & S.P.H. Jain
Science College, Neminagar, Chandwad, Dist. Nashik-423101**

Affiliated to Savitribai Phule Pune University, Pune Id. No. PU/NS/AC/015/1970

Department of Mathematics

Year of Establishment: 2010
Programmes: B.Sc., M.Sc.

Head: Mr. Chaitanya B. Kumbharde
E-mail: kumbharde.cbacs@snjb.org

Date: 25/06/2021

Report on Development and proficiency in English Sem II (A.Y.2020-21)

This soft skill course consists of practical and theoretical aspects and 30 hours 2 credit course for M.Sc. Part II Mathematics students. The 34 students were benefited by this soft skill course.

LEARNING OBJECTIVES

The objectives of the Skills Soft Training Manual are to give each student:

- To explore written communication skill
- To develop problem solving skills and presentation skill
- To guide students in making appropriate and responsible decisions,
- To create a desire to fulfill individual goals as well as team building ability
- Explain the meaning and definition of Communication
- Understand the purpose and significance of Communication.
- Describe various types of Communication.
- Explain the elements involved in the Communication Process.
- Understand the Barriers to Effective Communication.
- Know the importance and relevance of Soft Skills.

• Communication Skill:

The communicative skills involve effective communication in both the national language and English language in different contexts and with different people. There are eight sub-skills under communicative skills of which three are the must have skills and five are the good to have skills. Communicative skills are an integral part of any education system either in higher education or lower education. As mentioned earlier, in many countries, basic education or primary education

is mandatory and it focuses on reading, writing and ciphering. People learn to read books, write letters, figure accounts and develop skills necessary to fulfill their expected roles in their households and community. At this very level, emphasis has been given to develop the communicative skills of individual so that by the time they leave college, they are able to participate in public and community activities and decision making. What is found to be missing in the nation's present human capital is the lack of communicative skills. The absence of good communicative skills somehow or rather has an influence on the poor presentation of their views and decisions made to gain other's confidence and respect. Communicative skills have also been greatly emphasized in the reorientation of basic education for ESD (Education for sustainable development) which is: the ability to communicate effectively (both orally and in writing). The communicative skill seemed to be one important component that lacks in the future human capital. The incompetence of the future graduates to master both languages will be a set-back to a lot of potential development and advancement of the country. Thus, this is a good time for reorientation of the curriculum of higher institutions to embed communicative.

Team building /Coordination skill:

The ability to work with people from different social cultural background to achieve a common goal, students are encouraged to play their role in the group and to respect opinions and attitudes of others in the group. They are also expected to contribute to the group's plan and coordinate the group's effort besides being responsible to the group's decision. This skill is also part of ESD as stated in the reorientation of basic education: the ability to work cooperatively with other people. If the future human capital can attain these skills, we can be rest assure that the future generation will collaborate ideas and cooperate a taskforce towards the well-being of the nation.



Course Coordinator
S. J. Ansari



PG Coordinator
Mr. M. P. Zanje



Mr. C. B. Kumbharde
HEAD
Department of Mathema
KKHA Arts, SMGL Commerce
SPHJ Science College, Chanc
Dist- Nashik 423 101 Mahara

Title: Introduction to Latex and Scilab**Eligibility:** Bachelor's degree in any Faculty**Objectives:** To create understanding of the LaTeX

To understand the fundamentals of Scilab and Utilization

Development of Proficiency in English and Communication Skills

Course Structure: The course is equivalent to 4 credits. The course can be run in any of the semesters.**Syllabus for LaTeX (1 CREDIT COURSE – 15 hours)**

S.NO.	CONTENT	INSTRUCTIONAL HOURS
1	Installation of the software LaTeX	1
2	Understanding Latex compilation Basic Syntex, Writing equations, Matrix, Tables	2
3	Page Layout – Titles, Abstract Chapters, Sections, References, Equation references, citation. List making environments Table of contents, Generating new commands, Figure handling numbering, List of figures, List of tables, Generating index.	4
4	Packages: Geometry, Hyperref, amsmath, amssymb, algorithms, algorithmic graphic, color, tilez listing.	3
5	Classes: article, book, report, beamer, slides. IEEtran.	2
6	Applications to: Writing Resumae Writing question paper Writing articles/ research papers Presentation using beamer.	3
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	<ul style="list-style-type: none"> - Function plotting - Data plotting 	
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Syllabus for Soft Skills (2 CREDIT COURSE – 30 hours)

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	Skills <ul style="list-style-type: none"> • Team Building Practices through group exercises , team task / role play • Ability to mixing & accommodation • Ability to work together 	<ul style="list-style-type: none"> • Group • Group Dynamics • Team building 	
5	Telecommunication Skills <ul style="list-style-type: none"> • Tele – etiquette • Receiving Calls • Transferring calls • Taking Message/ Voice Mails • Making Outgoing Calls • Receiving Fax 	Electronic Communication concept <ul style="list-style-type: none"> • Working principle of Mini exchange and its features and facilities. 	3

NOTE: Suggestion is to open a common film club for all the departments, where the movie can be displayed at fixed time and which shall cost minimal charges from the viewers.

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Assessment: Final assessment by written and group discussion. Skill based assessment will be as per the case study.



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27/11/1928

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Programmes: B.Sc., M.Sc.

Head: Mr. Chaitanya B. Kumbharde
E-mail: kumbharde.cbacs@snjb.org

Date: 25/01/2021

Department of Mathematics has conducted 2 Credit (30 hours) Course on Introduction to Latex and Scilab as a part of Skill Component in M.Sc. II Mathematics syllabus during the 3rd semester. It consisted of lectures and hands on practical sessions in computer lab. Examination for the same was conducted on 17/01/2021 in which 34 students were present.

Course coordinator

PG Coordinator

Mr. C. B. Kumbharde
Department of Mathematics
KKHA Arts, SMGL Commerce
SPHJ Science College, Chandwad
Dist- Nashik 423 101 Maharashtra

Skill Component -I {Latex and Scilab} For M.Sc.-II Mathematics.

SNJB's KKHA ARTS, SMGL COMMERCE & SPHJ Science College Chandwad

* Required

1. Email *

2. Untitled Question

Latex has a command called -----that produces the popular PDF format files.

- a) PDFtex
- b) Pdflatex
- c) PDF
- d) Latexpfd

Mark only one oval.

a

b

c

d

3.

Full form of PDF is

- a) Perfect Document Format
- b) Portable Double Format
- c) Portable Document Format
- d) Perfect Deed Format

Mark only one oval.

a

b

c

d

4.

-----command can be used to explicitly specify the logical structure of the document.

- a) \chapter
- b) \section
- c) \paragraph
- d) All of the above

Mark only one oval.

a

b

c

d

5.

-----command is used to indicate the date the document was created.

- a) \title
- b) \auther
- c) \date
- d) \document

Mark only one oval.

- a
- b
- c
- d

6.

-----command is used to define the documents title.

- a) \title
- b) \author
- c) \date
- d) \document

Mark only one oval.

- a
- b
- c
- d

7.

-----command is used to specify the author(s) of the document.

- a) \title
- b) \author
- c) \date
- d) \document

Mark only one oval.

- a
- b
- c
- d

8.

Syntax for latex text colour

- a) \begin{color}{text}
- b) \setcolor{text}
- c) \textcolor{red}{text}
- d) \bgcolor{text}

Mark only one oval.

- a
- b
- c
- d

9.

Correct syntax for online formula

- a) $f(x) = x^2$
- b) $\{f(x) = x^2\}$
- c) $[f(x) = x^2]$
- d) $(f(x) = x^2)$

Mark only one oval.

- a
- b
- c
- d

10.

Which is correct syntax for Latex

- a) $\begin{...}\stop\end{...}$
- b) $\begin{...}\end{...}$
- c) $\start{...}\end{...}$
- d) $\open{...}\end{...}$

Mark only one oval.

- a
- b
- c
- d

11.

Which is correct syntax for Latex table

- a) `\begin{tables}`
- b) `\start{tabular}`
- c) `\open{table}`
- d) `\begin{tabular}`

Mark only one oval.

- a
- b
- c
- d

12.

Which Palette contains Clock_C block?

- a) Single routing
- b) Event Handling
- c) Continuous time systems
- d) Discreate time systems

Mark only one oval.

- a
- b
- c
- d

13.

If $a=1$, $b=2$, $c=3$, How do you find out the value of the variable on Scilab console?

- a) By typing a b c
- b) By typing a b c
- c) By typing a. b. c.

Mark only one oval.

 a b c

14.

Identify the command used to generate all ones in a 4x4 matrix.

- a) One(4,4)
- b) Show(4,4)
- c) Ones(4,4)
- d) Zeros(4,4)

Mark only one oval.

 a b c d

15.

Command to find eigen value of a matrix A is ?

- a) Roots(A)
- b) eigen(A)
- c) eye(A)
- d) spec(A)

Mark only one oval.

 a b c d

16.

How do you calculate the determinant of square matrix 'A'

- a) Det(A)
- b) Spec(A)
- c) det(A)
- d) A'

Mark only one oval.

 a b c d

17.

How do you create a matrix consisting of pseudo random number of 3 by 3

- a) prand(3,3)
- b) random(3,3)
- c) Pseudo(3,3)
- d) rand(3,3)

Mark only one oval.

- a
- b
- c
- d

18.

How do you find the square root of 49 on Scilab console ?

- a) sgroot(49)
- b) sqrtrt(49)
- c) sqrt(49)
- d) squareroot(49)

Mark only one oval.

- a
- b
- c
- d

19.

If $A = \begin{bmatrix} 1 & 2 & -1 \\ -2 & -6 & 4 \\ -1 & -3 & 3 \end{bmatrix}$, what does the command `inv(A)` and `spec(A)` do respectively?

- a) Find inverse and eigen value
- b) Find transpose and determinant
- c) Finds inverse and determinant
- d) Find length and eigen value

Mark only one oval.

 a b c d

20.

Which statements below are true with respect to `Scilab`?

- I. Runs only on Linux
 - II. Is used for numerical computation
- a) Only I
 - b) Only II
 - c) Both I and II
 - d) None of the above

Mark only one oval.

 a b c d

21.

How do you create an identity matrix of 3x3

- a) ones(3,3)
- b) zeros(3,3)
- c) iden(3,3)
- d) eye(3,3)

Mark only one oval.

- a
- b
- c
- d

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Google Forms

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- c) PDF
- d) Latexpfd

Mark only one oval.

a

b

c

d

3.

Full form of PDF is

- a) Perfect Document Format
- b) Portable Double Format
- c) Portable Document Format
- d) Perfect Deed Format

Mark only one oval.

a

b

c

d

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a

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Mark only one oval.

- a
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6.

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Mark only one oval.

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- c) \date
- d) \document

Mark only one oval.

- a
- b
- c
- d

8.

Syntax for latex text colour

- a) \begin{color}{text}
- b) \setcolor{text}
- c) \textcolor{red}{text}
- d) \bgcolor{text}

Mark only one oval.

- a
- b
- c
- d

9.

Correct syntax for online formula

- a) $f(x) = x^2$
- b) $\{f(x) = x^2\}$
- c) $[f(x) = x^2]$
- d) $(f(x) = x^2)$

Mark only one oval.

- a
- b
- c
- d

10.

Which is correct syntax for Latex

- a) $\begin{...}\stop\end{...}$
- b) $\begin{...}\end{...}$
- c) $\start{...}\end{...}$
- d) $\open{...}\end{...}$

Mark only one oval.

- a
- b
- c
- d

11.

Which is correct syntax for Latex table

- a) `\begin{tables}`
- b) `\start{tabular}`
- c) `\open{table}`
- d) `\begin{tabular}`

Mark only one oval.

- a
- b
- c
- d

12.

Which Palette contains Clock_C block?

- a) Single routing
- b) Event Handling
- c) Continuous time systems
- d) Discreate time systems

Mark only one oval.

- a
- b
- c
- d

13.

If $a=1$, $b=2$, $c=3$, How do you find out the value of the variable on Scilab console?

- a) By typing a b c
- b) By typing a b c
- c) By typing a. b. c.

Mark only one oval.

 a b c

14.

Identify the command used to generate all ones in a 4x4 matrix.

- a) One(4,4)
- b) Show(4,4)
- c) Ones(4,4)
- d) Zeros(4,4)

Mark only one oval.

 a b c d

15.

Command to find eigen value of a matrix A is ?

- a) Roots(A)
- b) eigen(A)
- c) eye(A)
- d) spec(A)

Mark only one oval.

a

b

c

d

16.

How do you calculate the determinant of square matrix 'A'

- a) Det(A)
- b) Spec(A)
- c) det(A)
- d) A'

Mark only one oval.

a

b

c

d

17.

How do you create a matrix consisting of pseudo random number of 3 by 3

- a) prand(3,3)
- b) random(3,3)
- c) Pseudo(3,3)
- d) rand(3,3)

Mark only one oval.

- a
- b
- c
- d

18.

How do you find the square root of 49 on Scilab console ?

- a) sgroot(49)
- b) sqrtrt(49)
- c) sqrt(49)
- d) squareroot(49)

Mark only one oval.

- a
- b
- c
- d

19.

If $A = \begin{bmatrix} 1 & 2 & -1 \\ -2 & -6 & 4 \\ -1 & -3 & 3 \end{bmatrix}$, what does the command `inv(A)` and `spec(A)` do respectively?

- a) Find inverse and eigen value
- b) Find transpose and determinant
- c) Finds inverse and determinant
- d) Find length and eigen value

Mark only one oval.

 a b c d

20.

Which statements below are true with respect to `Scilab`?

- I. Runs only on Linux
 - II. Is used for numerical computation
- a) Only I
 - b) Only II
 - c) Both I and II
 - d) None of the above

Mark only one oval.

 a b c d

21.

How do you create an identity matrix of 3x3

- a) ones(3,3)
- b) zeros(3,3)
- c) iden(3,3)
- d) eye(3,3)

Mark only one oval.

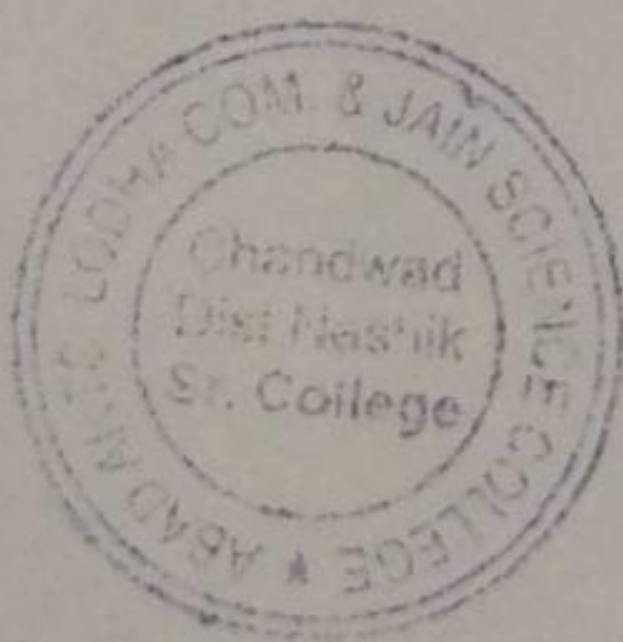
- a
- b
- c
- d

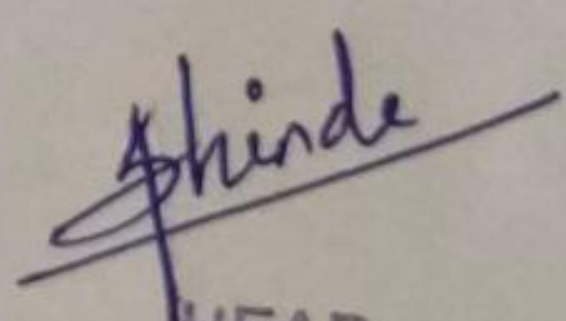
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Karmveer K. H. Abad Arts, Shriman M. G. Lodha Commerce & Shriman
P. H. Jain Science (Senior) College, Neminagar, Chandwad Dist. Nashik
Department of Physics
Report
Skill development (M.Sc.IInd) 2020-2021

The SPPU had implemented skill development course in all final Year (Second year) of PG. in our department for academic year 2020-2021, 22 students have appeared for skill development in IIIrd semester of PG. For the Skill development-Ist 22 students have given exam, All students have passed the exam, Similarly for IVth semester of PG, the Skill development-IInd 22 students have given exam, all students have passed the exam. The Question papers and their corresponding results are attached with this report.




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KKHA Arts, SMGL Commerce &
SPHJ Science College, Chandwad
Dist- Nashik 423 101 Maharashtra

Skill Development-II

*Required

1. Email *

2. Name *

3. Email *

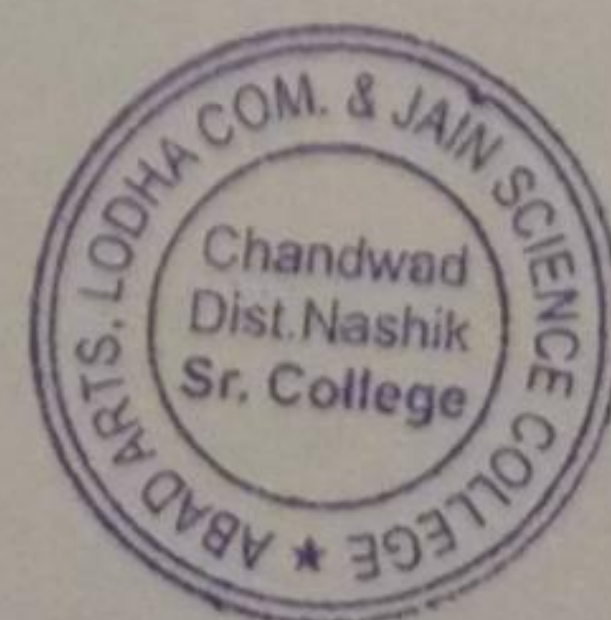
4. Seat no. *

5. 1. The blades in wind turbines are connected to__

2 points

Mark only one oval.

- a) Nacelle
- b) Tower
- c) Foundations
- d) String



6. 2. When the source of light is not sun light then the photo voltaic cell is used as _____ 2 points

Mark only one oval.

- a) Photo diode
 b) Photo detector
 c) Photo voltaic cell
 d) Photo transmitter

7. 3. The region where the electrons and holes diffused across the junction is called _____ 2 points

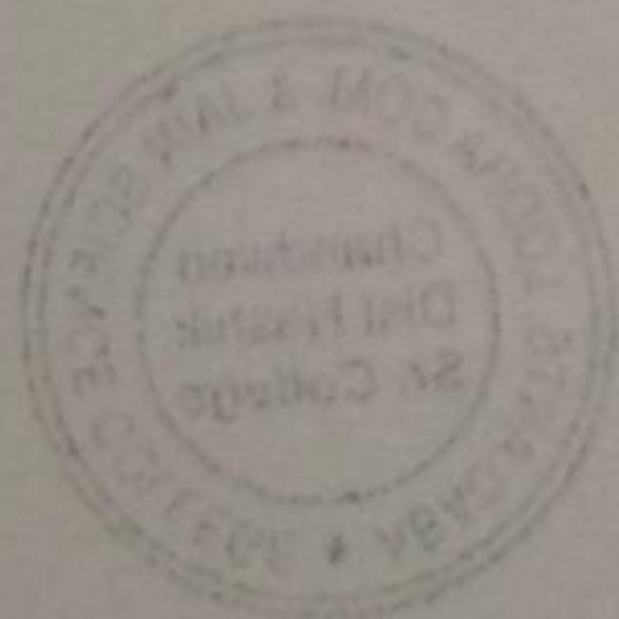
Mark only one oval.

- a) Depletion region
 b) Depletion Junction
 c) Depletion space
 d) Depletion boundary

8. 4. Trapped heat inside the earth is known as _____ 2 points

Mark only one oval.

- a) Heat energy
 b) Kinetic energy
 c) Geothermal energy
 d) Thermal energy



9. 5. In hydroelectricity power _____

2 points

Mark only one oval.

- a) Kinetic energy is transferred to potential
- b) Potential energy is transferred to kinetic
- c) Solar energy is transferred to wind energy
- d) Wind energy is transferred to solar energy

10. 6. The open circuit voltage V_{oc} , is the voltage available from a solar cell and this occurs at

2 points

Mark only one oval.

- a) minimum , zero
- b) maximum, one
- c) maximum, grater than 4
- d) maximum, zero

11. 7. What is biogas composed of?

2 points

Mark only one oval.

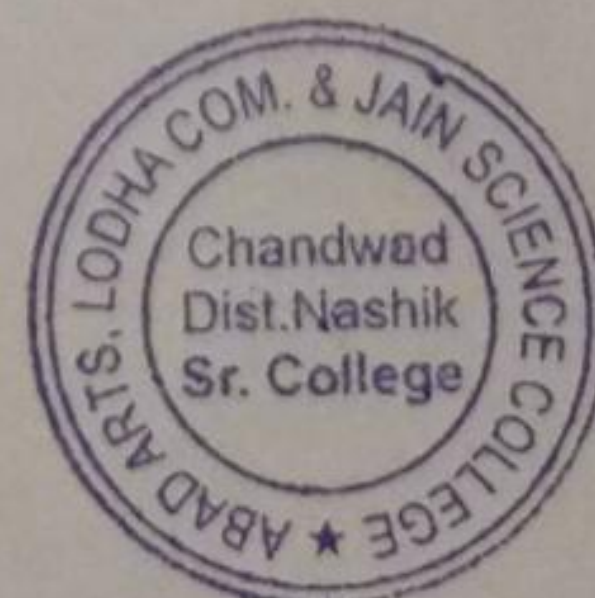
- a) O_2 and CO_2
- b) CO_2 and NO_2
- c) CH_4 and CO_2
- d) CH_4 and O_2

12. 8. What is the range of retention time during anaerobic digestion?

2 points

Mark only one oval.

- 20-30 days
- 40-100 days
- 40-80 days
- 10-20 days



13. 9. In anaerobic digestion system which of the following statement holds good? 2 points

Mark only one oval.

- A flocculent is to be added to bring about flocculation
- Acids are necessary to be added to make the pH neutral
- Alkaline are necessary to be added to make the pH neutral
- A coagulant is necessary to be added in order to bring about coagulation

14. 10. The two basic principle classifications are grid-connected and..... 2 points

Mark only one oval.

- stand alone
- utility grid
- grid connected
- none of these

15. 11. Maximum daily energy consumption is ... 2 points

Mark only one oval.

- 43000 Wh.
- 430 Wh.
- 43 Wh.
- 4300 Wh.



16. 12. A solar cell has the following parameters $V_{oc}=0.6V$, $I_{sc}=30mA/cm^2$ and $FF=76\%$ what will be the efficiency? 2 points

Mark only one oval.

- 30%
- 13.68%
- 19.68%
- 50%

17. 13. Which of the following is an example of passive solar technology? 2 points

Mark only one oval.

- Active solar water heating systems
- Photovoltaic
- solar furnace
- Solar thermo-mechanical systems

18. 14. Series and parallel combination of the solar cell is known as _____ 2 points

Mark only one oval.

- Solar light
- solar sight
- solar eye
- solar array

19. 15. Calculate Fill factor using the data: $P_{max}=15 W$, $V_{oc}=18 V$, $I_{sc}=4 A$ 2 points

Mark only one oval.

- 0.65
- 0.59
- 0.20
- 0.98



20. 16. The function of a solar collector is to convert..... 2 points

Mark only one oval.

- Solar Energy into Electricity
 Solar Energy radiation
 Solar Energy thermal energy
 Solar Energy mechanical energy

21. 17. What is total amount of solar energy received by earth and atmosphere? 2 points

Mark only one oval.

- 3.8×10^{24} J/year
 9.2×10^{24} J/year
 5.4×10^{24} J/year
 2.1×10^{24} J/year

22. 18. In which collector the efficiency is maximum _____ 2 points

Mark only one oval.

- 25%
 15%
 28%
 50%



23. 19. Which cell is used to convert solar energy directly into electrical energy 2 points

Mark only one oval.

- Dry cell
 battery
 photovoltaic cell
 all of these

24. 20. The general range of solar cell efficiency is _____ 2 points

Mark only one oval.

- 5% → 10%
 10% → 15%
 15% → 20%
 all are correct

25. 21. What are the main components of a fuel cell? 2 points

Mark only one oval.

- Anode, Cathode, Electrolyte
 Anode, Cathode
 Anode, Cathode, Electrolyte, connecting wire
 Anode, Cathode, electrolyte, membrane including fuel

26. 22. What is the difference between a photodiode and a solar cell? 2 points

Mark only one oval.

- a) No external bias in photodiode
 b) No external bias in solar cell
 c) Larger surface area in photodiode
 d) No difference



27. 23. The amount of photo generated current increases slightly with an increase in __ 2 points

Mark only one oval.

- a) Temperature
 b) Photons
 c) Diode current
 d) Shunt current

28. 24. _____ is one of the most important materials is also known as solar grade silicon. 2 points

Mark only one oval.

- a) Crushed silicon
 b) Crystalline silicon
 c) Powdered silicon
 d) Silicon

29. 25. _____ is a direct band gap material. 2 points

Mark only one oval.

- a) Copper Indium Gallium Selenide
 b) Copper Selenide
 c) Copper Gallium Telluride
 d) Copper Indium Gallium Diselenide

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12/04/2021 01:26:40	Samirraundal1310@gmail.com	32 / 50	Raundal Samir Ratan
12/04/2021 01:26:49	uzmabano1911999@gmail.com	48 / 50	Uzma Bano Mohammad I
12/04/2021 01:31:05	faizasiddiqua44@gmail.com	48 / 50	Faiza Siddiqua Mohammad
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