Smt. Narsamma Arts, Commerce and Science College, Amravati
Department of Computer Science
Academic Session 2021-22

Baseline Assessment Profile

A. Zero Test Report

1. Question Paper of Zero Test
(This questionnaire contains 20 MCQ type questions, each carrying 01 mark, Qualifying Score: 50%. Questionnaire is intended to test the general know how of the examinee at the entry point of the sought course)

Smt. Narsamma Arts, Commerce and Science College, Amravati
Department of Computer Science
Academic Session 2021-22

Baseline Assessment (Zero Test) Report 2021-22

Importance:

Students enter our classrooms with a wide range of backgrounds. One strategy for finding out where your students are starting from is to give them a "baseline assessment" at the beginning of the term. The baseline assessment can determine whether a student have particular areas in which they are underachieving.

Baseline assessments also referred to as an on-entry assessment can provide a useful picture of what a student knows or can do at a certain point in time, as well as gaps in their learning. This information should be used to inform subsequent teaching and learning activities. Without good baseline assessment – a strong starting point – it is impossible to measure progress well: if you don't know where someone started, knowing whether their end point represents 'good progress' or not is not feasible.

Objective:

Baseline Assessment (Zero Test) is an instrument for collecting baseline data and the method used by teachers to find out a student's learning needs, their natural ability, potential and check whether they are underachieving in relation to their potential. The purpose of baseline assessment is to establish a point from which future measurements and predictions can be calculated.

Mechanism:

The baseline assessment gives teachers a brief understanding of a student's entry-level. A baseline assessment is carried out when a student gets admitted to the course B. Sc.

Part I. This is usually referred to as a Zero Test. It highlights strengths and areas for improvement so teachers are aware of every individual's requirements.

Zero Test of 20 minutes duration for every incumbent student, comprising of 20 MCQ type questions for 20 marks relating to computer science common know how. 50% score qualifies the test. The zero test is conducted approximately in the last week of July every year to ensure that the maximum number of incumbents are covered in the test.

The students who fail in zero test will undergo a bridge course to increase / compensate their knowledge level to cope up with the forthcoming course content during the course B.Sc.1 for the subject Computer Science.

The assessment questions below are designed to assess students' prior knowledge about computer science subject through zero test.

Smt. Narasamma Hirayya Education Society, Amravati's
Smt. Narsamma Arts, Commerce and Science College, Kirannagar, Amravati
Department of Computer Science
Academic Session 2021-22
B. Sc. Part – I Sem. I

Zero Test Questionnaire	Date of Exam: 04-10-2021	Time: 3.30 – 4.15 PM
Note:3 1. This questionnaire contains 20 MCQ type questions		2. All questions are compulsory
3. Each question carries 01 mark		4. Qualifying Score: 50%

Nameof Student: _____

1. Who is father of modern computers?
A. Abraham Lincoln   B. James Gosling   C. Charles Babbage   D. Gordon E. Moore
2. _____ are software which is used to do particular task.
A. Operating system   B. Program   C. Data   D. Software
3. _____ controls the way in which the computer system functions and provides a means by which users can interact with the computer.
A. Operating system   B. Motherboard   C. Platform   D. Application software
4. The difference between people with access to computers and the Internet and those without this access is known as the:
A. digital divide   B. Internet divide   C. Cyberway divide   D. Web divide
5. The term 'Pentium' is related to
A. DVD   B. Hard Disk   C. Microprocessor   D. Mouse
6. What does HTTP stands for?
A. Head Tail Transfer Protocol   B. Hypertext Transfer Protocol
C. Hypertext Transfer Plotter   D. Hypertext Transfer Plot
7. ……….is the process of dividing the disk into tracks and sectors.
A. Allotting   B. Crashing   C. Formatting   D. Tracking
8. Which computer memory is used for storing programs and data currently being processed by the CPU?
A. Internal memory   B. Mass memory   C. Non-volatile memory   D. PROM
9. Which of the following is NOT a component of the Central Processing Unit of the computer?
A. Universal Serial Bus   B. Uninterrupted Power Supply   C. CU   D. A & B
10. When cutting and pasting, cutting section is temporarily stored in
A. Dashboard   B. Clipboard   C. Hard drive   D. Diskette
11. _____ Is the execution of at least two different programs simultaneously,
A. Multiprocessing   B. Multi programming   C. Recovery   D. Integrity

12. The brain of any computer system is
A. ALU   B. Memory   C. CPU   D. Control unit
13. Which of the following is the 1's complement of 10?
A. 01   B. 110   C. 11   D. 10
14. Which part interprets program instructions and initiate control operations.
A. Input   B. Storage unit   C. Logic unit   D. Control unit
15. The binary system uses powers of
A. 2   B. 10   C. 8   D. 16
16. A computer program that converts assembly language to machine language is
A. Compiler   B. Interpreter   C. Assembler   D. Comparator
17. Which computer has been designed to be as compact as possible?
A. Mini   B. Super computer   C. Microcomputer   D. Mainframe
18. Which method is used to connect a remote computer?
A. Device   B. Dialup   C. Diagnostic   D. Logic circuit
19. Which of the following is still useful for adding numbers?
A. EDSAC   B. ENIAC   C. Abacus   D. UNIVAC
20. ASCII stands for:
A. American standard code for information interchange   B. All-purpose scientific code for information interchange   C. American security code for information interchange   D. American Scientific code for information interchange

Answer Key:
1. C   2. B   3. A   4. A   5. C   6. B   7. B   8. A   9. D   10. B   11. A   12. C   13. A14. D   15. A   16. C   17. C   18. B   19. C   20. A

The assessment attendance are as follows…

Smt. Narsamma Arts, Commerce and Science College, Kirannagar, Amravati
Department of Computer Science   **Academic Session 2021-22**
Subject: Computer Science   **Date: 04 October 2022**
Max. Marks: 20   **Time: 3.30PM**
Zero Test Participant Attendance List

Sr.No.	Name of the Student	Sign of Student
1	Abhishek Shashidharrao Neware	Present
2	Akash Purushottam Kalpande	Present
3	Aman Pravindra Ramteke	Absent
4	Ansh Devidas Gupta	Present
5	Darshan Dadarao Kasdekar	Present
6	Harichandra Bisram Bhilawekar	Present
7	Jayesh Sunil Dindekar	Present
8	Jivan Nandkishor Bethekar	Present
9	Karan Prabhakar Babar	Absent
10	Neha Sanjay Wankhade	Present
11	Piyush Pramod Meshram	Absent
12	Pranay Rajendra Talware	Absent
13	Pratik Rajesh Ganorkar	Present
14	Pritam Dnyaneshwar Jirapure	Present
15	Rohit Dnyaneshwar Kadam	Absent
16	Rupesh Jayram Bhilavekar	Present
17	Sachin Harikisan Patankar	Present
18	Shravani Dhanraj Lokhande	Absent
19	Sneha Dhanrajpant Nagle	Present
20	Sonali Mohanrao Gulhane	Absent
21	Sudhir Ananda Meshram	Present
22	Sukhada Rajesh Hambarde	Absent

23	Vaibhav Devendra Rupnarayan	Absent
24	Vedant Ravindra Gaikwad	Present
25	Vicky Suresh Mandve	Absent
26	Vishal Vinayak Dhadase	Present
27	Vishwas Ramkisan Dahikar	Absent
28	Vyenkatesh Suresh Kohari	Absent
29	Yash Pramod Deulkar	Absent
30	Aditi Damapure	Present
31	Nikita Narenra Bambal	Present

2. Zero Test Participant List and Result

The assessment results are as follows…

Smt. Narsamma Arts, Commerce and Science College, Kirannagar, Amravati

Department of Computer Science   **Academic Session 2021-22**
Subject: Computer Science   **Date: 04 October 2022**
Max. Marks: 20   **Time: 3.30PM**

Zero Test Participant List and Result

Sr.No.	Name of the Student	Attendance	Marks Obtd.	Result
1	Abhishek Shashidharrao Neware		06	Fail
2	Akash Purushottam Kalpande		10	Pass
3	Aman Pravindra Ramteke		Absent	Absent
4	Ansh Devidas Gupta		05	Fail
5	Darshan Dadarao Kasdekar		10	Pass
6	Harichandra Bisram Bhilawekar		04	Fail
7	Jayesh Sunil Dindekar		09	Pass
8	Jivan Nandkishor Bethekar		08	Pass
9	Karan Prabhakar Babar		Absent	Absent
10	Neha Sanjay Wankhade		08	Pass
11	Piyush Pramod Meshram		Absent	Absent
12	Pranay Rajendra Talware		Absent	Absent
13	Pratik Rajesh Ganorkar		05	Fail
14	Pritam Dnyaneshwar Jirapure		10	Pass
15	Rohit Dnyaneshwar Kadam		Absent	Absent
16	Rupesh Jayram Bhilavekar		06	Fail
17	Sachin Harikisan Patankar		09	Pass
18	Shravani Dhanraj Lokhande		Absent	Absent
19	Sneha Dhanrajpant Nagle		11	Pass
20	Sonali Mohanrao Gulhane		Absent	Absent
21	Sudhir Ananda Meshram		12	Pass
22	Sukhada Rajesh Hambarde		Absent	Absent
23	Vaibhav Devendra Rupnarayan		Absent	Absent
24	Vedant Ravindra Gaikwad		09	Pass
25	Vicky Suresh Mandve		Absent	Absent
26	Vishal Vinayak Dhadase		10	Pass
27	Vishwas Ramkisan Dahikar		Absent	Absent
28	Vyenkatesh Suresh Kohari		Absent	Absent
29	Yash Pramod Deulkar		Absent	Absent
30	Aditi Damapure		05	Fail
31	Nikita Narenra Bambal		04	Fail

Total Admitted Students :- 31
Total Appeared Students :- 18
Total Absent Students :- 13
Total Pass Students :- 11
Total Fail Students :- 07

Signature: In-charge Teacher   HOD

B. Bridge Course in Computer Science: 2021-22

Smt. Narsamma Arts, Commerce and Science College, Amravati
Department of Computer Science
Academic Session 2021-22
Report on Bridge Course in Computer Science: 2021-22

Course Schedule
Name of the Course: Bridge Course in Computer Science

All the students admitted to the course B.Sc.1 in the subject computer science who failed to clear the zero test,

Course Duration: 01 Week (From 05th to 12th October, 2021 during 6.00 to 7.00PM.)

Bridge Course Assessment Date: 11th October, 2021, 6.00 PM

Curriculum for the Bridge course:
Computer science fundamentals, Computer Hardware, Input Output Devices, Windows Operating system, MS Office, Fundamental programming concepts, Programming language fundamentals, Computer Network fundamentals, Use of Internet, e-banking, e-commerce, Some useful and relevant websites

List of Participants:

On the basis of zero test results, following students are identified for bridge course to be conducted

Sr.No.	Name of the Student	Sr.No.	Name of the Student
1	Abhishek Shashidharrao Neware	9	Karan Prabhakar Babar
2	Ansh Devidas Gupta	10	Piyush Pramod Meshram
3	Harichandra Bisram Bhilawekar	11	Pranay Rajendra Talware
4	Pratik Rajesh Ganorkar	12	Rohit Dnyaneshwar Kadam
5	Rupesh Jayram Bhilavekar	13	Shravani Dhanraj Lokhande
6	Aditi Damapure	14	Sonali Mohanrao Gulhane

7	Nikita Narenra Bambal	15	Sukhada Rajesh Hambarde
8	Aman Pravindra Ramteke	16	Vaibhav Devendra Rupnarayan

Attendance Sheet:

Department of Computer Science
Attendance Sheet for Bridge Course in Computer Science
Academic Session 2021-22
Duration of the Course: 05th to 12th October, 2021

Sr.No.	Name of the Student	Date							Days Present
		5	6	7	8	9	11	12	
1	Abhishek Shashidharrao Neware	P	P	A	P	P	P	P	6
2	Ansh Devidas Gupta	P	P	P	P	A	P	P	6
3	Harichandra Bisram Bhilawekar	P	P	P	P	P	P	P	7
4	Pratik Rajesh Ganorkar	P	P	P	P	P	A	P	6
5	Rupesh Jayram Bhilavekar	P	P	P	P	A	P	P	6
6	Aditi Damapure	P	A	P	P	P	A	P	5
7	Nikita Narenra Bambal	P	P	P	P	A	P	P	6
8	Aman Pravindra Ramteke	P	P	A	P	P	P	P	6
9	Karan Prabhakar Babar	P	P	P	P	P	P	P	7
10	Piyush Pramod Meshram	A	P	P	P	P	P	P	6
11	Pranay Rajendra Talware	P	P	A	P	A	P	P	5
12	Rohit Dnyaneshwar Kadam	P	P	P	P	P	P	A	6
13	Shravani Dhanraj Lokhande	P	P	A	P	A	P	P	5
14	Sonali Mohanrao Gulhane	P	P	P	P	P	A	P	6
15	Sukhada Rajesh Hambarde	P	P	P	P	P	P	P	7
16	Vaibhav Devendra Rupnarayan	P	P	P	A	P	P	P	6

Following are the assessment questions for the bridge course in computer science – 2021

Smt. NarasammaHirayya Education Society, Amravati's
Smt. NarsammaArts, Commerce and Science College, Kirannagar, Amravati
Department of Computer Science
Academic Session 2021-22
Bridge Course in Computer Science – 2021
Date of Exam: 14-10-2021, Time: 6.00PM

Note: 1. This questionnaire contains 20 MCQ type questions 2. All questions are compulsory
3. Each question carries 01 mark

Name of Student: _____

1. A light sensitive device that converts drawing, printed text or other images into digital form is
A. Keyboard   B. Plotter   C. Scanner   D. OMR   E. None of these
2. Which protocol provides e-mail facility among different hosts?
A. FTP   B. SMTP   C. TELNET   D. SNMP   E. None of these

3. The basic architecture of computer was developed by
A. John Von Neumann   B. Charles Babbage   C. Blaise Pascal   D. Garden Moore
E. None of these
4. In order to tell Excel that we are entering a formula in cell, we must begin with an operator such as
A. $ B. @   C. +   D. =   E. #
5. In how many generations a computer can be classified?
A. 3   B. 4   C. 5   D. 6   E. None of these
6. Fifth generation computers are based on
A. Artificial Intelligence   B. Programming Intelligence   C. System Knowledge
D. VVLSI   E. None of these
7. First generation of computer was based on which technology?
A. Transistor   B. LSI   C. VLSI   D. Vaccum Tube   E. None of these
8. Microprocessor was introduced in which generation of computer?
A. Second Generation   B. Fourth Generation   C. Both (A) and (B)
D. Third Generation   E. All of these
9. Second generation computers are made of
A. Vaccum Tubes   B. Transistors   C. LSI   D. VLSI   E. None of these
10. Which of the following memory is non-volatile?
A. SRAM   B. DRAM   C. ROM   D. All of the above   E. None of these
11. GUI stands for
A. Graph Use Interface   B. Graphical Universal Interface   C. Graphical User Interface
D. Graphical Unique Interface   E. None of these
12. Any data or instruction entered into the memory of a computer is considered as
A. Storage   B. Output   C. Input   D. Information   E. None of these
13. Time during which a job is processed by the computer is:
A. Execution Time   B. Delay Time   C. Real Time   D. Waiting Time   E. None of these
14. Which of the following circuit is used as a 'Memory device' in computers?
A. Rectifier   B. Flip Flop   C. Comparator   D. Attenuator   E. None of these
15. The memory sizes in mainframe computers and advanced technology microcomputer are expressed as
A. Bytes   B. Kilobytes   C. Bits   D. Megabytes   E. None of these
16. Which one of the following is not an application software package?
A. Red Hat Linux   B. Microsoft Office   C. Adobe Pagemaker   D. Open Office
E. None of these
17. Which of the following statement is wrong?
A. Photoshop is a graphical design tool by Adobe   B. Linux is free and open source software
C. Linux is owned and sold by Microsoft   D. Windows XP is an operating system
E. None of the above
18. An error is also known as:
A. Bug   B. Debug   C. Cursor   D. Icon   E. None of these
19. Microsoft Word is an example of
A. an operating system   B. Processing device   C. Application software
D. an input device   E. System Software
20. Who invented the supercomputer?
A. Charles Babbage   B. JH Van Tassell   C. Charles Ginsberg   D. Seymour Cray
E. None of these

Answer Key:
1. Option C   2. Option B   3. Option A   4. Option D   5. Option C   6. Option A
7. Option D   8. Option B   9. Option B   10. Option C   11. Option C   12. Option C
13. Option A   14. Option B   15. Option D   16. Option A   17. Option C   18. Option A
19. Option C   20. Option D

The assessment results of the Bridge Course in Computer Science - 2021 are as follows…

Smt. Narsamma Arts, Commerce and Science College, Kirannagar, Amravati
Department of Computer Science
Academic Session 2021-22
Bridge Course in Computer Science - 2021 - Participant List and Result

Subject: Computer Science   **Date: 16-10-2021**
Max. Marks: 20   **Time: 3.30PM**

Sr.No.	Name of the Student	Attendance	Marks Obtd.	Result
1	Abhishek Shashidharrao Neware	Present	15	Pass
2	Ansh Devidas Gupta	Present	13	Pass
3	Harichandra Bisram Bhilawekar	Present	11	Pass
4	Pratik Rajesh Ganorkar	Absent	Absent	Absent
5	Rupesh Jayram Bhilavekar	Present	12	Pass
6	Aditi Damapure	Present	16	Pass
7	Nikita Narenra Bambal	Present	15	Pass
8	Aman Pravindra Ramteke	Present	13	Pass
9	Karan Prabhakar Babar	Present	14	Pass
10	Piyush Pramod Meshram	Present	06	Fail
11	Pranay Rajendra Talware	Present	08	Fail
12	Rohit Dnyaneshwar Kadam	Present	17	Pass
13	Shravani Dhanraj Lokhande	Present	16	Pass
14	Sonali Mohanrao Gulhane	Present	13	Pass
15	Sukhada Rajesh Hambarde	Present	16	Pass
16	Vaibhav Devendra Rupnarayan	Present	07	Fail

Signature: In-charge Teacher   HOD

C. Report on Remedial Classes

Smt Narsamma Arts, Commerce and Science College, Amravati
Department of Computer Science
Academic Session 2021-22

Report on Remedial Classes in Computer Science: 2021-22

Course Schedule

Remedial classes are conducted for extra emphasized teaching to remove the difficulties the slow learners face during learning the course content and to improve their confidence.

Name of the Course: Remedial Classes in Computer Science
Course Duration: 10 Days (From 18h to 26th October, 2021 during 6.00 to 7.00PM.)
Slow learners identified from B.Sc. II Sem. IV university exam. (Summer-2020) Results, now admitted to B.Sc. III Sem. V in the subject Computer Science

List of Participants:

Following students of B.Sc. III (Sem.6) are identified for Remedial Classes (Computer Science) to be conducted:

Sr.No.	Name of the Student	Sr.No.	Name of the Student
1	Gauri Sureshrao Tayade	6	Sakshi Dharmpal Gondane
2	Vaishnavi Ramkrushna Amdare	7	Diya Vinod Tayade
3	Sayyad Yejas Ali	8	Krutika Kishor Shrirao
4	Janavi Vijay Ingole	9	Raj Sudhakar Raut
5	Gayatri Rajkumar Hukare	10	Sakshi Milindrao Ahiwar

The attendance Sheet:

Department of Computer Science
Attendance Sheet for Remedial Classes in Computer Science
Academic Session 2021-22
Duration of the Course: 18th to 26th January, 2022

Sr.No.	Name of the Student	Attendance for the date								Days Pres.	Days Abst.
		18	19	20	21	22	24	25	26		
1	Gauri Sureshrao Tayade	P	P	A	P	P	P	P	P	7	1
2	Vaishnavi Ramkrushna Amdare	P	P	P	P	A	P	P	P	7	1
3	Sayyad Yejas Ali	P	P	P	P	P	P	P	P	8	0
4	Janavi Vijay Ingole	P	P	P	P	P	A	P	P	7	1
5	Gayatri Rajkumar Hukare	P	P	P	P	A	P	P	P	7	1
6	Sakshi Dharmpal Gondane	P	A	P	P	P	A	P	P	6	2
7	Diya Vinod Tayade	P	P	P	P	A	P	P	P	7	1
8	Krutika Kishor Shrirao	P	P	A	P	P	P	P	P	7	1
9	Raj Sudhakar Raut	P	P	P	P	P	P	P	P	8	0
10	Sakshi Milindrao Ahiwar	A	P	P	P	P	P	P	P	7	1

Internal Assessments:

(Internal class test, Assignment, Viva, Industrial visit, field visit, Project, Seminar, Study tour)

Sr. No.	Type of Internal Assessments	Date	No. of Students Admitted	No. of Students Present	No. of Student Passed	Percentage of Result
1	B.Sc. I S I		31	24	24	100.00
2	B.Sc. II S III		47	42	41	97.61
3	B.Sc. III S V		33	31	31	100.00

Asignment

1	B.Sc. I S I	31	31	31	100.00

Project Submission

Sr. No.	Class/Sem	No. of Students Admitted	No. of Students Present	No. of Student Pass	Percentage of Result
1	B.Sc. II S III	47	46	46	97.88
2	B.Sc. III S V	33	33	33	100.00

Seminar / Tour / Group Discussion

Sr. No.	Class/Sem	No. of Students Admitted	No. of Students Present	No. of Student Pass	Percentage of Result
1	B.Sc. II S III	47	46	46	97.88
2	B.Sc. III S V	33	33	33	100.00

2021-22

Summer 2022

Internal Test

Sr. No.	Class/Sem	No. of Students Admitted	No. of Students Present	No. of Student Pass	Percentage of Result
1	B.Sc. I S I	31	23	21	91.30
2	B.Sc. II S III	47	37	36	97.39
3	B.Sc. III S V	33	31	29	93.54

Asignment

1	B.Sc. I S I	31	31	31	100.00

Project Submission

Sr. No.	Class/Sem	No. of Students Admitted	No. of Students Present	No. of Student Pass	Percentage of Result
1	B.Sc. II S III	47	31	31	100.00
2	B.Sc. III S V	33	26	26	100.00

Seminar / Tour / Group Discussion

Sr. No.	Class/Sem	No. of Students Admitted	No. of Students Present	No. of Student Pass	Percentage of Result
1	B.Sc. II S III	47	32	32	100.00
2	B.Sc. III S V	33	28	28	100.00

Unit Test/Common Test/Internal Assessment Test/Special Tests (PG)

Class/Semester	No. of Students appeared	Passed	% of Passed students
M.Sc-I (sem-I)	29	29	100%
M.Sc II (sem-III)	27	27	100%
M.Sc-I (sem-II)	29	28	100%
M.Sc II (sem-IV)	27	20	100%

ICT Usage Profile

1. Details of ICT tools and material available in the department for teaching and learning

   Computing facility

UG Laboratory:	55 Desktop Computers
PG Laboratory:	12 Desktop Computers
Staff Room:	03 Desktop Computers
Laptops	02 Nos.
Printers (Laser)	05 Nos.
LCD Projectors	01 Nos.
Speakers	02 Sets
Modem	01 Nos.
Network Switches	02 Nos
USB HDD	01 No.
Digital Camera	01 No.
External DVD ROM Drive	01 No.

   The computers available in both the laboratories are connected in LAN and support 100 MBPS FTTH optical fiber cable Internet connectivity of BSNL
   Extra network outlets to other departments of the college have been provided from the same connection for sharing.

2. Details of social media used by the department for effective communication with the students
   e-platforms used: Google Classroom, Google Meet, Whats App Group

3. Details of Online teaching / learning tools used by the department for effective teaching and learning process
   e-platforms used: Google Classroom, Google Meet, Whats App Group

Signature and Stamp
HoD

Smt. Narsamma Arts, Commerce and Science college, Kiran Nagar, Amravati
Department of Mathematics
Paper of Base Line Test
2021-2022
B. Sc. I Sem I

1. $\lim\limits_{x \to a} sinx = \ldots$

    a) $\sin a$ b) $\sin x$ c)$\cos x$ d)$\cos a$

2. $\dfrac{d}{dx} x^n = \ldots$

    a) nx   b) nx^{n-1} c) xn^{x-2} d) xn_{x-2}

3. $\dfrac{d}{dx}[\cos x] = \ldots$

    a) $-\sin x$ b) $\cos x$ c) $-\sin a$ d) $\cos a$

4. $\dfrac{d}{dx} e^x = \cdots$

    a) e^n b) e^x c) a^e d) e^z

5. $\int x^n \, dx = \ldots$

    a) $\dfrac{x^{n+1}}{n+1} + c$ b) $\dfrac{n^{n-1}}{x} + c$ c)$\dfrac{n+1}{x^{n+1}} + c$ d) $\dfrac{x}{n^{n-1}}$

6. $\int \dfrac{1}{x} \, dx = \ldots\ldots$

a) $\log|x| + c$ b) $\log\dfrac{1}{x} + c$ c)$\log|a| + c$ d) $-\log|x| + c$

7. $\int \sin x \, dx = \cdots$

a) $\sin x + c$ b) $-\sin x + c$ c) $\cos x + c$ d) $-\cos x + c$

8. $\int a^x \, dx = \cdots$

a)$\dfrac{\log a}{a^x} + c$ b)$\dfrac{\log a}{x^a} + c$ c)$\dfrac{x^a}{\log x} + c$ d)$\dfrac{a^x}{\log a} + c$

9. $\int \sec x . \tan x \, dx = \cdots$

a) $\tan x + c$ b)$\sec x + c$ c) $\tan^2 x + c$ d)$\sec^2 x + c$

10. $\int \cosec^2 x \, dx = \ldots\ldots\ldots$

a)$\cot x + c$ b) $\cosec x + c$ c) $-\cosec x + c$ d)- $\cot x + c$

Smt. Narsamma Arts Commerce and Science College, Kiran Nagar, Amravati
Bridge Course/Enrichment Course 2021-2022
Department of Mathematics
Class - B.Sc. I[st] year sem-I
Attendence Sheet

Time-10.42 to 11.30 Am

Conducted by –

S.No.	Name of Student	30/12/2021	31/12/2021	01/01/2022
1	Ruposh J. Bhilawekar	Rush	Rush	Rush
2	Jivan N. Betuekar	Bethekar	Bethekar	Bethekar
3	Harichandra B. Bhilawekar	Bhuekar	Bhuekar	Bhuekar
4	Sachin H. Patankar	Sachin	Sachin	Sachin
5	Shruti K. Wankhade	Shruti Wankhade	Shruti Wankhade	Shruti Wankhade
6	Ansh D. Gupta	Ansh	Ansh	Ansh
7	Abhishek S. Nware	ASMP	Ashu	Ashu
8	Pranay R. Talware	Talwar	Tawe	B
9	Karan Babar	Babar	Babar	Babar
10	Vedant Shingnapure	VS	VS	VS
11	Sukhda Hambarde	SHambarde	SHambarde	SHambarde
12	Vicky Mandave	Vme	Vme	Vme

Smt. Narsamma Arts Commerce and Science College, Kiran Nagar, Amravati
Bridge Course/Enrichment Course 2021-2022
Department of Mathematics
Class - B.Sc. Ist year sem-I
Zero Test / Baseline Test

Time-10.42 to 11.30 Am
Max Marks: 20
Conducted by –

Date: 15|11|2022

S.No.	Name of Student	Maeks Obtained	Result	Remarks
1)	Pranay R. Talware	04	fail	Slow learner
2)	Harichandra B. Bhilawekar	14	Pass	fast learner
3)	Abhishek S. Neware	06	fail	Slow —"—
4)	Himanshu Bhujbale	16	Pass	fast learner
5)	Sukhada Hambarde	4	fail	Slow —"—
6)	Aditi Demapure	20	Pass	fast learner
7)	Rupesh Bhilawekar	14	Pass	fast learner
8)	Ansh Gupta	18	Pass	fast learner
9)	Jayesh Dindekar	082	fail	Slow —"—
10)	Vicky Mandave	06	fail	Slow —"—
11)	Sachin Patankar	14	Pass	Fast Learner
12)	Shruti K. Wankhade	14	Pass	Fast Learner
13)	Karan Babar	18	Pass	fast learn
14)	Vedant shingnapure	04	fail	

Smt. Narsamma Arts, Commerce and Science College, Kiran Nagar, Amravati.

Best Practice of Department of Mathematics

Bridge Course and Baseline Test

Date and duration of Activity: Date: 30/12/2021 to 01/01/2022   **(Three Days)**
                                          15/01/2022   **(One Day)**

Sr. No.	Details of the Program	
1.	**Program organized by**	Department of Mathematics
2	**Program Level**	Departmental Level
3.	**Title of the Program & other details**	Topic/Theme: **Bridge Course / Baseline Test**
		Joint Venture: NO
4.	**Nature of Program**	Bridge Course – Offline
		Baseline Test - Online
		If online mention link: https://forms.gle/arNaKKNKfohXVS9U6
5.	**Aim / Objective of Program**	To find the slow learner and to improve the basic knowledge of the students.
6.	**No. of Participants**	**Students: 14**
		Teachers: 02
		Total: 16
7.	**Publication through: (either e-media or paper media or any other)**	NA
8.	**Detail information of Program**	A Bridge Course of Mathematics Department 2021-2022 was organized on 30/12/2021 to 01/01/2022. Bridge Course was conducted for B.Sc. I (Semester - I) students by offline mode. This course base on the syllabus of 11th and 12th syllabus. On the basis of Bridge Course Baseline test was conducted on 15/01/2022 at 10.30 AM to 11.15 AM. Mode of the test was online on Google Form. The link of the test was https://forms.gle/arNaKKNKfohXVS9U6. All students had been given test honestly and sincerely. Out of 14 students, 08 students scored good marks.

9.	**Output of the Program**	14 students has attended Baseline Test. Out of which 06 students are found slow learners.
10.	**Name of Members of Organization committee:**	**Convener –** **Dr. V. A. Sharma, HOD of Mathematics, Smt. Narsamma Arts, Commerce And Science College, Kiran Nagar, Amravati.**
11.	**Report Signatory/ies**	
12.	**Financial Assistance (In Rs. If received)**	NA

NOTE – also provide the photographs (in soft copy) of the event/activity.

Timestamp	Email Address	Score	Name
1/15/2022 12:44:03	rkasdekar955@gmail.com	6 / 20	Rahul
1/15/2022 12:45:24	rkasdekar955@gmail.com	2 / 20	Rahul
1/15/2022 12:49:27	Pranaytalware2004@gmail.com	4 / 20	Pranay
1/15/2022 12:49:27	haribhilawekar2021@gmail.com	14 / 20	Harichandra Bisram Bhilawekar
1/15/2022 12:53:12	Abhishekn62563@gmail.com	6 / 20	Abhishek S. Neware
1/15/2022 12:53:37	himanshubhujbal066@gmail.com	16 / 20	Himanshu bhujbale
1/15/2022 12:54:33	sukhadahambarde@gmail.com	4 / 20	Sukhada Hambarde
1/15/2022 12:55:14	aditi.demapure04@gmail.com	20 / 20	Aditi Demapure
1/15/2022 12:58:44	rupeshbhilawekar2003@gmai.com	14 / 20	Rupesh Bhilawekar
1/15/2022 13:00:11	anshg0007@gmail.comcom	18 / 20	Ansh
1/15/2022 13:02:03	dindekarjayesh@gmail.com	2 / 20	Jayesh Dindekar
1/15/2022 13:02:33	vmandave7@gmail.com	6 / 20	Vicky sureshamandave
1/15/2022 13:05:33	sachinpatankar194@gmail.com	14 / 20	Sachinpatankar
1/15/2022 13:06:21	shrutikw6@gmail.com	14 / 20	Shruti k. Wankhade
1/15/2022 13:17:48	karanbabar83@gmail.com	18 / 20	Karan Babar
1/15/2022 13:21:13	vedantshingnapure1@gmail.com	4 / 20	Vedantshingnapure
1/15/2022 13:41:49	kalpandebharati01@gmail.com	18 / 20	Akash purushottamkalpande
1/15/2022 13:44:43	kalpandebharati01@gmail.com	18 / 20	Akash purushottamkalpande
1/15/2022 14:03:23	jivanbethekar266@gmail.com	12 / 20	Jivan Bethekar
1/15/2022 14:05:32	jivanbethekar266@gmail.com	14 / 20	Jivan Bethekar

Result of Baseline Test on Google Form:

Assessment Profile
(Internal & University Assessments)

1. **Internal Assessments: i) Schedule ii) Details iii) Analysis**
    (Internal class test, Assignment, Viva, Industrial visit, field visit, Project, Seminar, Study tour)

B.Sc. I Sem I (Winter- 2021)

Sr. No.	Type of Internal Assessments	Date	No. of Students Admitted	No. of Students Present	No. of Student Passed	Percentage of Result
1.	Assignment	21/12/2021	23	11	11	100%
2.	Internal Test I	27/12/2021	23	13	13	100%
3.	Internal Test II	29/12/2021	23	13	13	100%

B.Sc. II Sem III (Winter- 2021)

Sr. No.	Type of Internal Assessments	Date	No. of Students Admitted	No. of Students Present	No. of StudentsPassed	Percentage of Result
1.	Assignment	21/12/2021	47	33	33	100%
2.	Group Discussion	21/12/2021	47	35	35	100%
3.	Internal Test I	27/12/2021	47	40	40	100%
4.	Internal Test II	29/12/2021	47	42	42	100%
5.	Project	21/12/2021	47	35	35	100%

B.Sc. III Sem V (Winter- 2021)

Sr. No.	Type of Internal Assessments	Date	No. of Students Admitted	No. of Students Present	No. of Students Passed	Percentage of Result
1.	Assignment	21/12/2021	30	22	22	100%
2.	Group Discussion	21/12/2021	30	18	18	100%

3.	Internal Test I	27/12/2021	30	29	29	100%
4.	Internal Test II	29/12/2021	30	29	29	100%
5.	Project	21/12/2021	30	22	22	100%

M.Sc. I Sem I (Winter- 2021)

Sr. No.	Type of Internal Assessments	Date	No. of Students Admitted	No. of Students Present	No. of Students Passed	Percentage of Result
1.	Assignment	04/01/2022	40	36	36	100%
2.	Group Discussion	04/01/2022	40	36	36	100%
3.	Internal Test	27/12/2021 to 31/12/2021	40	40	40	100%
4.	Viva	04/01/2022	40	36	36	100%

M.Sc. II Sem III (Winter- 2021)

Sr. No.	Type of Internal Assessments	Date	No. of Students Admitted	No. of Students Present	No. of Student Passed	Percentage of Result
1.	Assignment	04/01/2022	59	53	53	100%
2.	Group Discussion	04/01/2022	59	52	52	100%
3.	Internal Test	27/12/2021 to 31/12/2021	59	59	59	100%
4.	Viva	04/01/2022	59	53	53	100%

B.Sc. I Sem II (Summer- 2022)

Sr. No.	Type of Internal Assessments	Date	No. of Students Admitted	No. of Students Present	No. of Student Passed	Percentage of Result
1.	Assignment	04/05/2022	23	17	17	100%
2.	Internal Test I	28/04/2022	23	17	17	100%
3.	Internal Test II	02/05/2022	23	17	17	100%

B.Sc. II Sem IV (Summer- 2022)

Sr. No.	Type of Internal Assessments	Date	No. of Students Admitted	No. of Students Present	No. of Students passed	Percentage of Result
1.	Assignment	04/05/2022	47	39	39	100%
2.	Seminar	04/05/2022	47	39	39	100%
3.	Internal Test I	28/04/2022	47	36	36	100%
4.	Internal Test II	02/05/2022	47	36	36	100%
5.	Project	04/05/2022	47	39	39	100%

B.Sc. III Sem VI (Summer - 2022)

Sr. No.	Type of Internal Assessments	Date	No. of Students Admitted	No. of Students Present	No. of Student Passed	Percentage of Result
1.	Assignment	04/05/2022	30	29	29	100%
2.	Seminar	04/05/2022	30	29	29	100%
3.	Internal Test I	28/04/2022	30	29	29	100%
4.	Internal Test II	02/05/2022	30	29	29	100%
5.	Project	04/05/2022	30	29	29	100%

M.Sc. I Sem II (Summer- 2022)

Sr.	Type of Internal	Date	No. of	No. of	No. of	Percentage of

No.	Assessments		Students Admitted	Students Present	Student Passed	Result
1.	Assignment	04/05/2022	40	37	37	100%
2.	Seminar	04/05/2022	40	37	37	100%
3.	Internal Test	25/04/2022 to 29/04/2022	40	37	37	100%
4.	Viva	04/05/2022	40	37	37	100%
5.	Case Study	04/05/2022	40	37	37	100%

M.Sc. II Sem IV (Summer-2022)

Sr. No.	Type of Internal Assessments	Date	No. of Students Admitted	No. of Students Present	No. of Student Passed	Percentage of Result
1.	Assignment	04/05/2022	59	54	54	100%
2.	Seminar	04/05/2022	59	54	54	100%
3.	Internal Test	25/04/2022 to 29/04/2022	59	54	54	100%
4.	Viva	04/05/2022	59	54	54	100%
5.	Case Study	04/05/2022	59	54	54	100%

Annexure 9
ICT Usage Profile

1. Details of ICT tools and material available in the department for teaching and learning :

   Laptop, Android Mobiles, Wi -Fi, Projector, Google classroom

2. Details of social media used by the department for effective communication with the students:
   Google Meet App, Zoom App.

3. Details of Online teaching / learning tools used by the department for effective teaching and learning process:
   White Board App, Equation Editor.

4. Specify Link and Details of Google Class room for teaching and learning:
   1) B.Sc. I: https://classroom.google.com/c/NDUwMzQ1ODE2OTI0?cjc=ls37dgw
   2) B.Sc. II: https://classroom.google.com/c/MjUyNjg5MTk1Mjc4?cjc=3mkhslu
   3) B.Sc. III: https://classroom.google.com/c/MjYyNjUzNTM1MjEz?cjc=zs7dgq3
   4) M.Sc. I: https://classroom.google.com/c/NDUwMzQ4NzgzNjAw?cjc=eqzskeq
   5) M.Sc. II: https://classroom.google.com/c/MjUyNjg5MTk1MTk5?cjc=mjfeoud

Sr. No	Name / Title/ details sources available	Name of the class sources used for	Relevant topic in the syllabus if any
1.	Android Mobile, Wi- Fi	B.Sc. I	All Units
2.	Android Mobile, Wi- Fi	B.Sc. II	All Units
3.	Android Mobile, Wi- Fi	B.Sc. III	All Units
4.	Android Mobile, Wi- Fi	M.Sc. I	All Units
5.	Android Mobile, Wi- Fi	M.Sc. II	All Units

Signature and Stamp
HoD

Shrimati Narsamma Arts, Commerce & Commerce College, Kiran Nagar, Amravati

ANNUAL REPORT OF THE DEPARTMENT

Department: PHYSICS

Academic Session: 2021-22

Slow Learners Profile

Class: B. Sc. 1 (1S-Physics)   No. of students admitted: 30

Sr. No.	Name of Student	Marks obtained in the subject in previous University examination	Marks obtained in Zero Test/Unit Test / Special Test / Exam conducted by Department (Max. Marks 30)	Teacher's Opinions on student
1	Pratik Rajesh Ganorkar	NA	14	COVID-19 situation affects
2	Darshan Dadarao Kasdekar	NA	12	
3	Himanshu Vinod Bhujbale	NA	12	
4	Jayesh Sunil Dindekar	NA	12	
5	Neha Sanjay Wankhade	NA	12	
6	Nikita Narendra Bambal	NA	12	
7	Piyush Pramod Meshram	NA	12	
8	Sachin Harikisan Patankar	NA	12	
9	Vedant Tukaramji Shingnapure	NA	12	
10	Vishal Vinayak Dhadase	NA	12	
11	Vyenkatesh Suresh Kohari	NA	12	
12	Karan Prabhakar Babar	NA	11	
13	Mangesh Gajanan Surpatane	NA	11	
14	Rahul Lalchand Kasdekar	NA	11	
15	Shravani Dhanraj Lokhande	NA	11	
16	Sneha Dhanrajpant Nagle	NA	11	
17	Sonali Mohanrao Gulhane	NA	11	
18	Vedant Ravindra Gaikwad	NA	11	
19	Vicky Suresh Mandve	NA	11	
20	Vishwas Ramkisan Dahikar	NA	11	

Action Taken for improvement of Slow Learners

Sr. No.	Name of Student	Remedial Action Taken	Outcome Observed
1	Pratik Rajesh Ganorkar	• Special seminars • Increase in teachers' contact time • Providing practical experience in the laboratory • Providing youtube links • MCQ tests • To assign slow learner to the advanced learner	
2	Darshan Dadarao Kasdekar		
3	Himanshu Vinod Bhujbale		
4	Jayesh Sunil Dindekar		
5	Neha Sanjay Wankhade		
6	Nikita Narendra Bambal		Fifth Topper
7	Piyush Pramod Meshram		
8	Sachin Harikisan Patankar		
9	Vedant Tukaramji Shingnapure		
10	Vishal Vinayak Dhadase		
11	Vyenkatesh Suresh Kohari		
12	Karan Prabhakar Babar		
13	Mangesh Gajanan Surpatane		
14	Rahul Lalchand Kasdekar		
15	Shravani Dhanraj Lokhande		Second Topper
16	Sneha Dhanrajpant Nagle		
17	Sonali Mohanrao Gulhane		
18	Vedant Ravindra Gaikwad		
19	Vicky Suresh Mandve		
20	Vishwas Ramkisan Dahikar		

Signature of Teacher/s   **Signature of HOD**

1. Advanced Learners Profile

Class: B. Sc. 1S-Physics   No. of students admitted: 30

Sr. No.	Name of Student	Marks obtained in the subject in previous University examination	Marks obtained in Zero Test/Unit Test / Special Test / Exam conducted by Department	Teacher's Opinions on student
1	Pratiksha Arjun Nandane	NA	18	Hard Worker
2	Akash Purushottam Kalpande	NA	17	Working nicely
3	Shruti Kirtijan Wankhade	NA	17	Attentive
4	Pritam Dnyaneshwar Jirapure	NA	16	Working nicely
5	Sudhir Ananda Meshram	NA	16	Working nicely
6	Jivan Nandkishor Bethekar	NA	15	Attentive
7	Rohit Dnyaneshwar Kadam	NA	15	Working nicely
8	Sukhada Rajesh Hambarde	NA	15	Attentive
9	Vaibhav Devendra Rupnarayan	NA	15	Working nicely
10	Yash Pramod Deulkar	NA	15	Working nicely

Action Taken for improvement of Advanced Learners

Sr. No.	Name of Student	Supportive Action Taken	Outcome Observed
1 to 10	To advanced learners	Books from the Departmental Library are provided, special contact session for learning through youtube and I-NET	Sr. No. 3, 6, 7 are toppers in the Department

Signature of Teacher/s   **Signature of HOD**

Annexure 3
Baseline Assessment Profile

A. Zero Test Report

1. Question Paper of Zero Test

(This questionnaire contains 20 MCQ type questions, each carrying 01 mark, Qualifying Score: 50%. Questionnaire is intended to test the general know how of the examinee at the entry point of the sought course)

Department of Physics,
Arts, Commerce and Science College, Kiran Nagar, Amravati
in association with LASER_*an NGO* and Victor Tutorials Pvt. Ltd.
is conducting a
Test on Basics of PHYSICS (Baseline Zero Test)
[Marking Scale: It will be calculated as per %age scale]
Total Marks: 100 & time in minute: 50

Multiple Choice QUESTIONER (MCQs)

Note and think, Read this paragraph carefully.

Evaluate your primary level Physics with the scale provided at the end of this paragraph and enjoy following "fill in the blanks" with the usual words used by you in Physics, if necessary, any answer to justify your or asked word, write the proper reason which you think, at the back of the sheet by writing proper question number. The keys of the answers are provided in the bracket if needed by the Setter of these questions. With the primary thought of the Setter "nothing is ideal in the Universe". The percentage marks here doesn't matter. It can be a common learner's performance and if it is below four on 10 point scale, re-thinking from the start is needed again by paying more time & more brain storming, even discussions also if needed.

IMPORTANT: Answers of questions may vary; it purposes to think many times over the question and the matter to be solved.

1. The unit of weight and **Force** is same.
2. The unit of hemoglobin concentration is **gm/dl or kg/lit.**
3. The unit of perimeter of a circle and its **radius** is equal.
4. With the dimensional point, the unit of energy, work and the **Torque** is equivalent.
5. The S. I. system of unit is termed as **Systeme International de Unites.**
6. In FPS system of unit **second** is equivalent to **second** in SI.
7. The base of S. I. system is **10**, hence can be easily memorized.
8. 1 inch = **2.54** cm
9. The number of fundamental physical quantities till date is **07**
10. The symbol of unit of luminous flux is **cd**.
11. 1 TB = 10^{-3} HB, where H $=$ Hexa, T $=$ Tera.
12. 1 μm = 10^{-6} m.
13. Two equal vectors must have **magnitude** and **directions** equal.
14. If the weight of 3 kg wt and 4 kg wt are added together then total may be **less** (less/greater) than 7 kg wt.
15. Jagan poured 5 liter of milk into a can and then Amol removed 4 liter of milk to prepare a Milk-Tea, the volume of milk left in the can is **1** m^3.
16. Can you maintain hierarchy in the Force, work, power, mass velocity and acceleration, please write in the order. **Mass, velocity, acceleration, force, power & work.**

Note for 17 to 21: Use following reference formula

$$R = \sqrt{P^2 + Q^2 + 2PQ\cos\theta}$$

and then write about following vector magic,
17. F
18. If 7 inclined at 90° with 8 and added together, then we get **11**.
19. If two vectors of magnitude 7's are added directing oppositely then we will get **zero**.
20. Addition of 3 and 4 both pointing south may result into **5**.
21. The magnitude of the unit vector A is |A| or A.
22. If Sejal goes in North 40 meter and then turned through 60 degree in the south and moved 30 meter, how much distance she covered. Answer = **70** meter.
23. The dimension of power is $[M^1 L^2 T^{-3}]$, hence the dimension of work is $[M^1 L^2 T^{-2}]$.

(Discuss answers with reasons in the Tutorial Lectures with Prof. D. B. Suryawanshi, Bajpeyee A. U. and Shamkuwar S. H. (Answer Key will be displayed on departmental notice board just after the completion of Test) **Page 1** of TWO

24. The dimension of force is $[M^1 L^1 T^{-2}]$, hence the dimension of magnetic induction is $[M^1 T^{-2} I^{-1}]$.
25. D
26. The dimension of electrical intensity is $[M^1 L^1 T^{-3} I^{-1}]$.
27. The dimension of Pressure is $[M^1 L^{-1} T^{-2}]$.
28. The area and volume of a sphere of radius r can be written as $4\pi r^2$ and $4/3\pi r^3$.
29. Bajpeyee Sir's house is at 1 kilometer from the Amravati Bus Station, if he comes again to Bus station from his home the physical quantity become zero will be **displacement**.
30. The average velocity and the acceleration of the body attaining velocity *v* to *u* in time *t* can be written as (*u+v*)/2 & (*v–u*)/t.
31. The relation between linear and angular velocity is *v* = **r**.ω
32. According to Newton's first law of motion, change in velocity is **zero**.
33. Minimum number of forces required to justify Newton's Third law of motion is **two** and are named as **action** and **reaction**.
34. If the two bodies which collide sticks together then, is called as **in-elastic** collision.
35. The Earth can be an example of **inertial** frame of reference.
36. If the body on the Earth weighs as 9.6 Kg wt then its weight on the moon can be **1.6** Kg wt.
37. If a body of 20 kg on Earth is kept on the Mars then its mass will be **20 kg**.
38. If G is a notation of Universal Gravitational Constant and then its value is G = **6.67 x 10^{-11} Nm²/kg²**.
39. Earth is moving round the Sun in a circular orbit, the net work done by it is **zero**.
40. Latest 100th satellite launched by India in the space is called **Cartosat-2 / PSLV-C40**.
41. 1 kilowatt hour = **3.6 x 10^6** J
42. 1 horsepower = **746** watt
43. If a force F is applied at some angle θ to the body at a distance r from the axis of rotation then moment of a force can be written as **F.r.sinθ**.
44. The unit of frequency is reciprocal of the unit of **time**.
45. The one **crest / compression** and one **trough / rarefaction** constitutes a wavelength.
46. The surface waves due to water ripple are **transverse** waves.
47. For good hearing one should have a good **medium** along with a good ear and a good source.
48. **No** material medium is required for traveling of waves like rays of ordinary visible light, x-rays, radio waves, microwaves in oven, TV signals.
49. Seismic waves in sea which are a mixture of transverse and longitudinal waves are also called as **Tsunami** in Japanese.
50. Absolute zero temperature = **-273** °C.
51. The temperature of the human body becomes 102 °F in clinical language, means temperature in **38~39**°C.
52. In the equation PV = nRT, R is called as Universal Gas Constant. Its value is **8.314** J/mol.K or **2** cal/mol.K.

XXXX === 00 XX 00 === XXXX

(Discuss answers with reasons in the Tutorial Lectures with Prof. D. B. Suryawanshi, Bajpeyee A. U. and Shamkuwar S. H. (Answer Key will be displayed on departmental notice board just after the completion of Test) **Page 2** of TWO

2. Zero Test Participant List and Result

Name of the Student	Department Level Marks out of 100	Marks obtained out of 20	Result
Akash Purushottam Kalpande	50	**10**	6
Darshan Dadarao Kasdekar	46	**9**	8
Himanshu Vinod Bhujbale	40	**8**	12
Jayesh Sunil Dindekar	44	**9**	10
Jivan Nandkishor Bethekar	44	**9**	11
Karan Prabhakar Babar	56	**11**	3
Mangesh Gajanan Surpatane	40	**8**	13
Neha Sanjay Wankhade	36	**7**	21
Piyush Pramod Meshram	60	**12**	1
Pratik Rajesh Ganorkar	30	**6**	22
Pritam Dnyaneshwar Jirapure	40	**8**	14
Rahul Lalchand Kasdekar	40	**8**	15
Rohit Dnyaneshwar Kadam	60	**12**	2
Sachin Harikisan Patankar	40	**8**	16
Shruti Kirtijan Wankhade	40	**8**	17
Sonali Mohanrao Gulhane	56	**11**	4
Sudhir Ananda Meshram	56	**11**	5
Sukhada Rajesh Hambarde	40	**8**	18
Vaibhav Devendra Rupnarayan	40	**8**	19
Vedant Tukaramji Shingnapure	40	**8**	20
Vicky Suresh Mandve	50	**10**	7
Yash Pramod Deulkar	46	**9**	9

B. Bridge Course in Physics: 2021-22

1. Course Schedule
   a. Name of the Course: Bridge Course in Physics
   b. Eligibility: Students admitted and to be admitted to B. Sc. 1S-Physics of 2021-22
   c. Course Duration: Six working days (20-10-2021 to 26-10-2021)
2. Bridge Course Assessment Date: 26-10-2021
3. Curriculum for the Bridge course:

Arts Commerce and Science College
Kiran Nagar Amravati
Department: PHYSICS Class: B. Sc. I (1S-Physics)
Bridge Course (20-10-2021 to 26-10-2021)

Date: 20-10-2021
Time: 10.00 am onwards
Venue: Department of Physics
Contents:

- Introduction to Induction / Bridge Course
- What is this course? Need of course.
- Contents of B. Sc. I 1S-Physics syllabus of SGBAU
- Basic modifications to match higher grade syllabus
- Basic measuring instruments
- Basic measuring tools
- Need of the knowledge of measurements and errors
- Need of the knowledge of instruments
- Various units, how to memories it from formulae
- Various formulae, how to memories it from units
- Dimensional analytical sense
- Approach toward handling basics of experiments and preparing for to work on it
- Why are precautions listed at the end of experiments, not at the beginning?

Assignments (google classroom):
- Fill in the empty columns
- If possible, without taking help of a friend to fill it
- Go through Internet surfing and watch the videos of following measuring instruments carefully and then its schematic diagrams so that to aware about each part of it, it will be asked in the assessments for naming and labeling it.
- One 100 pages book is required for to write theory notes
- Manage to write properly for minute assessments and go through Zero test

Measuring Instruments	Measurements	S. I. Units	Laboratory units	Tick, if you have used it
Ammeter	Electric current in ampere			
Barometer	Atmospheric pressure			
Caliper	Distance			
Calorimeter	Heat (in chemical reaction)			
Dynamometer	Torque			
Electrometer	Electric charge			
Galvanometer	Electric current			
Hydrometer	Specific gravity of liquid			
Interferometer	Infrared light spectra			
Manometer	Pressure of gas			
Ohmmeter	Electric resistance			
Photometer	Intensity of light			
Sextant	Angle between two visible objects			
Spectrometer	Spectra (light spectrum)			
Thermometer	Temperature			
Thermopile	Small quantities of radiant heat			
Venturi meter	Flow of liquid			
Viscometer	Viscosity of fluid			
Voltmeter	Volt			
Screw gauge	Distance			

4. List of Participants:

	Students' Name
*	*Akash Purushottam Kalpande*
	Darshan Dadarao Kasdekar
	Himanshu Vinod Bhujbale
	Jayesh Sunil Dindekar
	Jivan Nandkishor Bethekar
	Karan Prabhakar Babar
	Mangesh Gajanan Surpatane
	Neha Sanjay Wankhade
	Piyush Pramod Meshram
	Pratik Rajesh Ganorkar
*	*Pritam Dnyaneshwar Jirapure*
	Rahul Lalchand Kasdekar
*	Rohit Dnyaneshwar Kadam
*	*Sachin Harikisan Patankar*
*	Shruti Kirtijan Wankhade
	Sonali Mohanrao Gulhane
	Sudhir Ananda Meshram
	Sukhada Rajesh Hambarde
	Vaibhav Devendra Rupnarayan
	Vedant Tukaramji Shingnapure
	Vicky Suresh Mandve
	Yash Pramod Deulkar

* late comers are also allowed

Multiple Choice QUESTIONER (MCQs)

Note and think, Read this paragraph carefully.

Evaluate your primary level Physics with the scale provided at the end of this paragraph and enjoy following "fill in the blanks" with the usual words used by you in Physics, if necessary, any answer to justify your or asked word, write the proper reason which you think, at the back of the sheet by writing proper question number. The keys of the answers are provided in the bracket if needed by the Setter of these questions. With the primary thought of the Setter "nothing is ideal in the Universe". The percentage marks here doesn't matter. It can be a common learner's performance and if it is below four on 10 point scale, re-thinking from the start is needed again by paying more time & more brain storming, even discussions also if needed.

> **IMPORTANT:** *Answers of questions may vary; it purposes to think many times over the question and the matter to be solved.*

1. The unit of weight and **Force** is same.
2. The unit of hemoglobin concentration is **gm/dl or kg/lit.**
3. The unit of perimeter of a circle and its **radius** is equal.
4. With the dimensional point, the unit of energy, work and the **Torque** is equivalent.
5. The S. I. system of unit is termed as **Systeme International de Unites**.
6. In FPS system of unit **second** is equivalent to **second** in SI.
7. The base of S. I. system is **10**, hence can be easily memorized.
8. 1 inch = **2.54** cm
9. The number of fundamental physical quantities till date is **07**
10. The symbol of unit of luminous flux is **cd**.
11. 1 TB = 10^{-3} HB, where H = Hexa, T = Tera.
12. 1 μm = 10^{-6} m.
13. Two equal vectors must have **magnitude** and **directions** equal.
14. If the weight of 3 kg wt and 4 kg wt are added together then total may be **less** (less/greater) than 7 kg wt.
15. Jagan poured 5 liter of milk into a can and then Amol removed 4 liter of milk to prepare a Milk-Tea, the volume of milk left in the can is **1** m^3.
16. Can you maintain hierarchy in the Force, work, power, mass velocity and acceleration, please write in the order. **Mass, velocity, acceleration, force, power & work.**

Note for 17 to 21: Use following reference formula

$$R = \sqrt{P^2 + Q^2 + 2PQ\cos\theta}$$

and then write about following vector magic,

17. F
18. If 7 inclined at 90° with 8 and added together, then we get **11**.
19. If two vectors of magnitude 7's are added directing oppositely then we will get **zero**.
20. Addition of 3 and 4 both pointing south may result into **5**.
21. The magnitude of the unit vector A is |**A**| or A.
22. If Sejal goes in North 40 meter and then turned through 60 degree in the south and moved 30 meter, how much distance she covered. Answer = **70** meter.
23. The dimension of power is [$M^1 L^2 T^{-3}$], hence the dimension of work is [$M^1 L^2 T^{-2}$].

(Discuss answers with reasons in the Tutorial Lectures with Prof. D. B. Suryawanshi, Bajpeyee A. U. and Shamkuwar S. H. (Answer Key will be displayed on departmental notice board just after the completion of Test)

5. Question Paper for Test on Bridge Course (as it is used for Zero Test)

24. The dimension of force is [M^1 L^1 T^{-2}], hence the dimension of magnetic induction is [M^1 T^{-2} I^{-1}].
25. D
26. The dimension of electrical intensity is [M^1 L^1 T^{-3} I^{-1}].
27. The dimension of Pressure is [M^1 L^{-1} T^{-2}].
28. The area and volume of a sphere of radius r can be written as 4πr^2 and 4/3πr^3.
29. Bajpeyee Sir's house is at 1 kilometer from the Amravati Bus Station, if he comes again to Bus station from his home the physical quantity become zero will be **displacement**.
30. The average velocity and the acceleration of the body attaining velocity *v* to *u* in time *t* can be written as (*u+v*)/2 & (*v-u*)/t.
31. The relation between linear and angular velocity is *v* = **r.ω**
32. According to Newton's first law of motion, change in velocity is **zero**.
33. Minimum number of forces required to justify Newton's Third law of motion is **two** and are named as **action** and **reaction**.
34. If the two bodies which collide sticks together then, is called as **in-elastic** collision.
35. The Earth can be an example of **inertial** frame of reference.
36. If the body on the Earth weighs as 9.6 Kg wt then its weight on the moon can be **1.6 Kg wt**.
37. If a body of 20 kg on Earth is kept on the Mars then its mass will be **20 kg**.
38. If G is a notation of Universal Gravitational Constant and then its value is G = **6.67 x 10^{-11} Nm^2/kg^2**.
39. Earth is moving round the Sun in a circular orbit, the net work done by it is **zero**.
40. Latest 100th satellite launched by India in the space is called **Cartosat-2 / PSLV-C40**.
41. 1 kilowatt hour = **3.6 x 10^6 J**
42. 1 horsepower = **746 watt**

43. If a force F is applied at some angle θ to the body at a distance r from the axis of rotation then moment of a force can be written as **F.r.sinθ**.
44. The unit of frequency is reciprocal of the unit of **time**.
45. The one **crest / compression** and one **trough / rarefaction** constitutes a wavelength.
46. The surface waves due to water ripple are **transverse** waves.
47. For good hearing one should have a good **medium** along with a good ear and a good source.
48. **No** material medium is required for traveling of waves like rays of ordinary visible light, x-rays, radio waves, microwaves in oven, TV signals.
49. Seismic waves in sea which are a mixture of transverse and longitudinal waves are also called as **Tsunami** in Japanese.
50. Absolute zero temperature = **-273** ºC.
51. The temperature of the human body becomes 102 ºF in clinical language, means temperature in **38~39ºC**
52. In the equation PV = nRT, R is called as Universal Gas Constant. Its value is **8.314** J/mol.K or **2** cal/mol.K.

XXXX === 00 XX 00 === XXXX

(Discuss answers with reasons in the Tutorial Lectures with Prof. D. B. Suryawanshi, Bajpeyee A. U. and Shamkuwar S. H. (Answer Key will be displayed on departmental notice board just after the completion of Test)   **Page 2** of TWO

6. Result of Test after Bridge course

Name of the Student	Out of 100	Out of 20	Rank
Sonali Mohanrao Gulhane	68	**14**	1
Sudhir Ananda Meshram	68	**14**	2
Rohit Dnyaneshwar Kadam	66	**13**	3
Karan Prabhakar Babar	60	**12**	4
Piyush Pramod Meshram	60	**12**	5
Akash Purushottam Kalpande	52	**10**	6
Vicky Suresh Mandve	52	**10**	7
Yash Pramod Deulkar	50	**10**	8
Jayesh Sunil Dindekar	46	**9**	9
Jivan Nandkishor Bethekar	46	**9**	10
Sukhada Rajesh Hambarde	46	**9**	11
Vaibhav Devendra Rupnarayan	46	**9**	12
Mangesh Gajanan Surpatane	44	**9**	13
Neha Sanjay Wankhade	44	**9**	14
Pritam Dnyaneshwar Jirapure	44	**9**	15
Rahul Lalchand Kasdekar	44	**9**	16
Vedant Tukaramji Shingnapure	44	**9**	17
Sachin Harikisan Patankar	42	**8**	18
Shruti Kirtijan Wankhade	42	**8**	19
Darshan Dadarao Kasdekar	40	**8**	20
Himanshu Vinod Bhujbale	38	**8**	21
Pratik Rajesh Ganorkar	32	**6**	22

Annexure 4
Assessment Profile
(Internal & University Assessments)

1. **Internal Assessments: i) Schedule ii) Details iii) Analysis**
   (Internal class test, Assignment, Viva, Industrial visit, field visit, Project, Seminar, Study tour)

Sr. No.	Type of Internal Assessments	Date	No. of Students Admitted	No. of Students Present	No. of Student Passed	Percentage of Result
1	Class Test B. Sc. I 1S-Physics	21-12-2021	26	21	20	95
2	Class Test B. Sc. II 3S-Physics	21-12-2021	51	51	49	96
3	Class Test B. Sc. III 5S-Physics	21-12-2021	25	25	25	100
4	Common Test B. Sc. I 1S-Physics	15-01-2022	27	27	21	78
5	Common Test B. Sc. II 3S-Physics	15-01-2022	51	46	42	91
6	Common Test B. Sc. III 5S-Physics	15-01-2022	32	32	29	91
7	MCQ based online Test B. Sc. I, 2S-Physics	06-05-2022	31	24	24	77
8	MCQ based online Test B. Sc. II, 4S-Physics	06-05-2022	46	23	23	50
9	MCQ based online Test B. Sc. III, 6S-Physics	06-05-2022	26	23	03	88
10	Class Test B. Sc. I 2S-Physics	11-05-2022	30	27	27	90
11	Class Test B. Sc. II 4S-Physics	11-05-2022	45	36	36	80
12	Class Test	11-05-	26	24	24	92

13	Common Test B. Sc. I 2S-Physics	**21-01-2022**	30	13	13	43
B. Sc. III 6S-Physics		**2022**				
13	Common Test B. Sc. I 2S-Physics	**21-01-2022**	30	13	13	43
14	Common Test B. Sc. II 4S-Physics	**21-01-2022**	45	32	32	71
15	Common Test B. Sc. III 6S-Physics	**21-01-2022**	26	21	21	81

*Record/s of all the examinations is emailed to the Examination Committee within scheduled time

Annexure 9
ICT Usage Profile

1. Details of ICT tools and material available in the department for teaching and learning
   - Online Lectures
   - Circulation of recorded videos of youtube
   - Ppt presentations
   - Use of Google Classrooms
   - Use of Google forms

2. Details of Social media used by the department for effective communication with the students
   - Establishing WhatsApp Group of all the Courses
   - Use of Internet for surfing

3. Details of Online teaching / learning tools used by the department for effective teaching and learning process
   - Online teaching of the syllabus contents
   - ICT infrastructure made available
   - Teaching and Demonstrations through LCD projectors

4. Specify Link and Details of Google Class room for teaching and learning

Sr. No	Name / Title/ details sources available	Name of the class sources used for	Relevant topic in the syllabus if any	Link
1	Assignment	BSc Part I	Unit wise assignme	https://classroom.google.com/u/0/c/NDM4MTI0MDgxNjU2

		PHY 2021-22	nts	
2	Assignment	BSc Part II PHY 2021-22	Unit wise assignments	https://classroom.google.com/u/0/c/NDM4MTI0MDgxNTU3
3	Assignment	BSc Part III PHY 2021-22	Unit wise assignments	https://classroom.google.com/u/0/c/NDM4MTI0MDgxNDk1

Signature and Stamp
HoD

Annexure 10
Certificate / Short Term / Skill Improvement Course Profile

Details of Certificate Course if any

Sr. No.	Name of Course	Duration	Admitted Student	Eligibility criteria
01	Certificate Course in Assembling Basic Experimental Laboratory Kits	15 days (23-05-2022 to 06-06-2022)	17	Willing students admitted to B. Sc. 3S-Physics

Signature and Stamp
HoD