



Vidyavardhini's

College of Engineering & Technology

Vasai Road (W)

First Year Engineering

Course Booklet (Theory)

Semester	I	Class	F.E. (CSE(DS))
Course Code	BSC102	Academic Year	2024-25
Course Name	Applied Physics		
Name of Faculty	Dr. Vivek Singh		



Vidyavardhini's College of Engineering & Technology

Vision

To be a premier institution of technical education, aiming at becoming a valuable resource for industry and society.

Mission

- To provide technologically inspiring environment for learning.
- To promote creativity, innovation and professional activities.
- To inculcate ethical and moral values.
- To cater personal, professional and societal needs through quality education.



Program Outcomes (POs):

Engineering Graduates will be able to:

- **PO1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- **PO2. Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- **PO3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- **PO4. Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- **PO5. Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- **PO6. The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- **PO7. Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- **PO8. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **PO9. Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- **PO10. Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- **PO11. Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- **PO12. Life-long learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



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Course Objectives

1	To provide students with a basic understanding of laser operation.
2	To explain the basic working principle of optical fiber and its use in communication technology.
3	To demonstrate principles of interference in thin film.
4	To describe Maxwell's equations and their significance.
5	To build a foundation of quantum mechanics needed for modern technology
6	To give exposure to the concept of Fermi level in semiconductors.

Course Outcomes

At the end of the course student will be able to:		Action verb	Bloom's Level
BSC102.1	Illustrate the use of laser in LiDAR and Barcode reading.	Illustrate	Level 3
BSC102.2	Apply the foundation of fiber optics in the development of modern communication technology.	Apply	Level 3
BSC102.3	Determine the wavelength of light and refractive index of liquid using the interference phenomenon.	Determine	Level 3
BSC102.4	Illustrate the significance of Maxwell's equations in the field of modern technology	Illustrate	Level 3
BSC102.5	Apply the foundations of quantum mechanics for the development of modern technology.	Apply	Level 3
BSC102.6	Explain the types of semiconductors based on variations in fermi level with temperature and doping concentration.	Explain	Level 2



Mapping of Course Modules with Course Outcomes

Course Modules	Course Outcomes					
	BSC102.1	BSC102.2	BSC102.3	BSC102.4	BSC102.5	BSC102.6
Laser	3					
Fibre Optics		3				
Interference in thin film			3			
Electrodynamics				3		
Quantum Physics					3	
Basics of Semiconductor Physics						2

Enter correlation level 1, 2 or 3 as defined below

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)

If there is no correlation put “—”.



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Mapping of Course Outcomes with Program Outcomes and Program Specific Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
BSC102.1	3	2	2	—	—	—	—	2	2	2	—	—
BSC102.2	3	2	2	—	—	—	—	2	2	2	—	2
BSC102.3	3	2	1	—	—	—	—	2	2	2	—	—
BSC102.4	3	2	1	—	—	—	—	2	2	2	—	—
BSC102.5	3	1	1	—	—	—	—	2	2	2	—	—
BSC102.6	3	2	2	—	—	—	—	2	2	2	—	—
Avg.	3	1.83	1.50	—	—	—	—	2.00	2.00	2.00	—	2.00
Rounded Avg	3	2	2	—	—	—	—	2	2	2	—	2

Enter correlation level 1, 2 or 3 as defined below

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)

If there is no correlation put “—”.



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CO-PO Mapping Justification

CO	PO	Level of mapping	Justification
BSC102.1	PO1	3	Students will be able to apply the knowledge of laser to engineering applications such as laser drilling, welding, bar code scanning, and sending signals through optical fiber cables for communication links (LAN, WAN, etc). Hence, it is significantly mapped and marked as level 3.
	PO2	2	Students will be able to analyse concepts of laser to solve complex problems in engineering such as internet speed and information processing. Hence, it is moderately mapped and marked as level 2.
	PO3	2	Students will be able to use basics of laser to design communication links in engineering; hence, it is moderately mapped and marked as level 2.
	PO8	2	Students will be able to write assignments and solve quizzes ethically with punctuality without copying from external sources. Hence, it is moderately mapped and marked as level 2.
	PO9	2	Students will be able to understand the value of working as a team in class presentations. Hence, it is moderately mapped and marked as level 2.
	PO10	2	Students will be able to communicate effectively during question-answer sessions in the class, which reflects their oral communication ability. In addition, assignments are a reflection of written communication ability. Hence, it is moderately mapped and marked as level 2.
BSC102.2	PO1	3	The students will be able to apply the basic knowledge of optical fiber to engineering applications such as optical fiber communication links (LAN, WAN, etc.), Hence, it is significantly mapped and marked as level 3.
	PO2	2	Students will be able to analyse concepts of optical fiber to solve complex problems in engineering using optical fibre sensors. Hence, it is moderately mapped and marked as level 2.
	PO3	2	Students will be able to use some basics of optical fiber to design communication links in engineering; hence, it is moderately mapped and marked as level 2.
	PO8	2	Students will be able to write assignments and solve quizzes ethically with punctuality without copying from external sources. Hence, it is moderately mapped and



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			marked as level 2.
	PO9	2	Students will be able to understand the value of working as a team in class presentations. Hence, it is moderately mapped and marked as level 2.
	PO10	2	Students will be able to communicate effectively during question-answer sessions in the class, which reflects their oral communication ability. In addition, assignments are a reflection of written communication ability. Hence, it is moderately mapped and marked as level 2.
	PO12	2	Students will be able to achieve some skills through presentations on optical fiber thereby stimulating their lifelong learning. Hence, it is moderately mapped and marked as level 2.
BSC102.3	PO1	3	Students will be able to apply the knowledge of interference to engineering applications such as thin film, ARC, and HRC. Hence, it is significantly mapped and marked as level 3.
	PO2	2	Students will be able to formulate and solve problems based on interference in thin film and antireflection coating. Hence, it is moderately mapped and marked as level 2.
	PO3	1	Students will be able to use basics of interference of thin film for designing optical instruments. Hence, it is slightly mapped and marked as level 1.
	PO8	2	Students will be able to write assignments and solve quizzes ethically with punctuality without copying from external sources. Hence, it is moderately mapped and marked as level 2.
	PO9	2	Students will be able to understand the value of working as a team in class presentations. Hence, it is moderately mapped and marked as level 2.
	PO10	2	Students will be able to communicate effectively during question-answer sessions in the class, which reflects their oral communication ability. In addition, assignments are a reflection of written communication ability. Hence, it is moderately mapped and marked as level 2.
	PO1	3	The students will be able to apply the theoretical understanding of gradient, divergence, and curl for engineering applications such as designing an antenna for communications. Hence, it is significantly mapped and marked as level 3.



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BSC102.4	PO2	2	The students will be able to formulate and solve complex engineering problems using laws of electrodynamics. Hence, it is moderately mapped and marked as level 2.
	PO3	1	Students will be able to design and develop engineering problems using Maxwell's equations such as wave propagation in communication. Hence, it is slightly mapped and marked as level 1.
	PO8	2	Students will be able to write some assignments and solve some quizzes ethically with punctuality without copying from external sources. Hence, it is moderately mapped and marked as level 2.
	PO9	2	Students will be able to understand the value of working as a team in class presentations. Hence, it is moderately mapped and marked as level 2.
	PO10	2	Students will be able to communicate effectively during question-answer sessions in the class, which reflects their oral communication ability. In addition, assignments are a reflection of written communication ability. Hence, moderately mapped and marked as level 2.
BSC102.5	PO1	3	Students will be able to apply the theoretical understanding of quantum mechanics to various engineering applications such as STM and quantum computing; hence, it is significantly mapped and marked as level 3.
	PO2	1	Students will be able to analyze the concepts of quantum mechanics to solve some real-world problems hence it is slightly mapped and marked as level 1.
	PO3	1	Students will be able to use fundamentals of quantum physics in various engineering designs; hence, it is slightly mapped and marked as level 1.
	PO8	2	Students will be able to write some assignments and solve quizzes ethically with punctuality without copying from external sources. Hence, it is moderately mapped and marked as level 2.
	PO9	2	Students will be able to understand the value of working as a team in some class presentations. Hence, it is moderately mapped and marked as level 2.
	PO10	2	Students will be able to communicate effectively during question-answer sessions in the class, which reflects their oral communication ability. In addition, assignments are a reflection of written communication ability. Hence, it is



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			moderately mapped and marked as level 2.
BSC102.6	PO1	3	The students will be able to apply the knowledge of semiconductors in engineering applications such as solar cell, LED, etc. Hence, it is significantly mapped and marked as level 3.
	PO2	2	Students will be able to use the concepts of semiconductors to analyze different semiconductor materials for their applications; hence, it is moderately mapped and marked as level 2.
	PO3	2	Students will be able to use concepts of semiconductor to design various electronic devices such as LED, photodiode and solar cell, etc. Hence, it is moderately mapped and marked as level 2.
	PO8	2	Students will be able to write some assignments and solve quizzes ethically with punctuality without copying from external sources. Hence, it is it is moderately mapped and marked as level 2.
	PO9	2	Students will be able to understand the value of working as a team in various class presentations. Hence, it is moderately mapped and marked as level 2.
	PO10	2	Students will be able to communicate effectively during some question-answer sessions in the class. Hence, it is moderately mapped and marked as level 2.



Curriculum Gaps Identified

Sr. No.	Course Title	Gap in the syllabus	Proposed Action
1	Applied Physics	Interference chapter lacks the derivation of radius of curvature in Newton's Ring.	Derivation of radius of curvature of Newton's ring was taken in the lecture and that needs to be included from the next academic year.
2	Applied Physics	In electrodynamics, significance of Gauss divergence theorem and Stokes theorem with examples should be included.	Basics of Gauss divergence theorem and stokes theorem was taken during the lectures and it should be included in the syllabus.

Modes of Content Delivery:

1	Classroom Teaching	9	Field Work
2	Slides/Handouts/Notes	10	Mini-Project
3	ICT Tools	11	Lab Experiment
4	Simulations/Demonstrations	12	Seminar/Case Studies
5	Solving Problems	13	Expert Lecture
6	Design Exercise	14	Workshops
7	Assignments	15	Self-Learning Online Resources
8	Tutorial	16	Any other (specify)



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Lesson plan

Subject / Code: Applied Physics / (BSC102)

A. Year: 2024-25

Year/ Sem: FE I **Faculty:** Dr. Vivek Singh

Div / Branch: E / CSE(DS)

Lect. No.	Topic	Planned date	Execution date	Modes of Content Delivery	Assessment Method
M1	LASER				Internal Assessment and University Exam
1	Characteristics of Lasers, Spontaneous emission and stimulated emission; metastable state, population inversion, pumping mechanism.	30.09.2024	30.09.2024	Classroom Teaching, Notes	IA-I and University Exam
2	Active medium & Active center, resonant cavity, coherence length and coherence time.	07.10.2024	07.10.2024	Classroom Teaching, Notes	IA-I and University Exam
3	Helium-Neon laser: construction and working.	08.10.2024	08.10.2024	Classroom Teaching, Notes	IA-I and University Exam
4	Application: Elementary Knowledge of LiDAR, Barcode Reader, Application of Laser in metal work.	14.10.2024	14.10.2024	Classroom Teaching, Notes and PPT	IA-I and University Exam
M2	OPTICAL FIBRE				Internal Assessment and University Exam
5	Optical Fiber: Critical angle; acceptance angle, Numerical Aperture, total internal reflection and propagation of light.	15.10.2024	15.10.2024	Classroom Teaching and Notes	IA-I and University Exam



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6	Types of optical: Single mode & Multimode, Step index & Graded index fibres	17.10.2024	17.10.2024	Classroom Teaching and Notes	IA-I and University Exam
7	Attenuation: Attenuation Coefficient and factors affecting attenuation.	18.10.2024	18.10.2024	Classroom Teaching and Notes	IA-I and University Exam
8	Fiber optic communication system, Advantages of optical fiber.	18.10.2024	18.10.2024	Classroom Teaching and Notes	IA-I and University Exam
M3	INTERFERENCE IN THIN FILM				Internal Assessment and University Exam
9	Interference in thin film of uniform thickness, conditions of maxima and minima for reflected system.	21.10.2024	21.10.2024	Classroom Teaching and Notes	IA-I and University Exam
10	Conditions of maxima and minima for wedge-shaped film (qualitative).	22.10.2024	21.10.2024	Classroom Teaching and Notes	IA-I and University Exam
11	Engineering Applications: - Newton's ring for the determination of unknown monochromatic wavelength and Refractive index of transparent liquid.	04.11.2024	04.11.2024	Classroom Teaching and Notes	IA-I and University Exam
12	Engineering Applications: - Anti-reflecting coating.	05.11.2024	05.11.2024	Classroom Teaching and Notes	IA-I and University Exam
M4	ELECTRODYNAMICS				Internal Assessment and University Exam
13	Vector calculus: Gradient, Divergence and Curl with Numericals.	12.11.2024	12.11.2024	Classroom Teaching and Notes	IA-II and University Exam
14	Gauss's law for electrostatics, Gauss's law for magnetostatics.	12.11.2024	12.11.2024	Classroom Teaching and Notes	IA-II and University Exam



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15	Ampere's circuital Law and Faraday's Law. Divergence theorem and Stokes theorem.	14.11.2024	14.11.2024	Classroom Teaching and Notes	IA-II and University Exam
16	Maxwell's equations in point form, integral form and their significance.	15.11.2024	15.11.2024	Classroom Teaching and Notes	IA-II and University Exam
M5	QUANTUM PHYSICS				Internal Assessment and University Exam
17	De-Broglie hypothesis of matter waves; de-Broglie wavelength for electron, properties of matter waves, problems of de-Broglie wavelength.	15.11.2024	15.11.2024	Classroom Teaching and Notes	IA-II and University Exam
18	Heisenberg's Uncertainty Principle and its applications: Non-existence of electron in the nucleus.	15.11.2024	15.11.2024	Classroom Teaching and Notes	IA-II and University Exam
19	Wave function and probability density, mathematical conditions for wave function, Need and significance of Schrodinger equations.	19.11.2024	19.11.2024	Classroom Teaching and Notes	IA-II and University Exam
20	Schrodinger time independent and time dependent equation.	19.11.2024	19.11.2024	Classroom Teaching, Notes and PPT	IA-II and University Exam
21	Energy of a particle enclosed in rigid box and related numerical problems	23.11.2024	23.11.2024	Classroom Teaching, Notes and PPT	IA-II and University Exam
22	Quantum mechanical tunneling and Principles of quantum computing: concept of Qubit	23.11.2024	23.11.2024	Classroom Teaching, Notes and PPT	IA-II and University Exam



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M6	SEMICONDUCTOR PHYSICS				Internal Assessment and University Exam
23	Direct & indirect band gap semiconductor, Electrical conductivity of semiconductors.	23.11.2024	23.11.2024	Classroom Teaching, Notes and PPT	IA-II and University Exam
24	Drift velocity, Mobility and conductivity in semiconductors.	26.11.2024	26.11.2024	Classroom Teaching, Notes and PPT	IA-II and University Exam
25	Fermi Dirac distribution function.	26.11.2024	26.11.2024	Classroom Teaching, Notes and PPT	IA-II and University Exam
26	Position of fermi level in intrinsic semiconductors and Position of fermi level in extrinsic semiconductors.	26.11.2024	26.11.2024	Classroom Teaching, Notes and PPT	IA-II and University Exam



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Subject / Code: Applied Physics / (BSC102)

A. Year: 2024-25

Year/ Sem: FE I **Faculty:** Dr. Vivek Singh

Div / Branch: F / CSE(DS)

Lect. No.	Topic	Planned date	Execution date	Modes of Content Delivery	Assessment Method
M1	LASER				Internal Assessment and University Exam
1	Characteristics of Lasers, Spontaneous emission and stimulated emission; metastable state, population inversion, pumping mechanism.	04/10/24	04/10/24	Classroom Teaching, Notes	IA-I and University Exam
2	Active medium & Active center, resonant cavity, coherence length and coherence time.	09/10/24	09/10/24	Classroom Teaching, Notes	IA-I and University Exam
3	Helium-Neon laser: construction and working.	11/10/24	11/10/24	Classroom Teaching, Notes	IA-I and University Exam
4	Application: Elementary Knowledge of LiDAR, Barcode Reader, Application of Laser in metal work.	11/10/24	11/10/24	Classroom Teaching, Notes and PPT	IA-I and University Exam
M2	OPTICAL FIBRE				Internal Assessment and University Exam
5	Optical Fiber: Critical angle; acceptance angle, Numerical Aperture, total internal reflection and propagation of light.	16/10/24	16/10/24	Classroom Teaching and Notes	IA-I and University Exam



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6	Types of optical: Single mode & Multimode, Step index & Graded index fibres	17/10/24	17/10/24	Classroom Teaching and Notes	IA-I and University Exam
7	Attenuation: Attenuation Coefficient and factors affecting attenuation.	18/10/24	18/10/24	Classroom Teaching and Notes	IA-I and University Exam
8	Fiber optic communication system, Advantages of optical fiber.	23/10/24	23/10/24	Classroom Teaching and Notes	IA-I and University Exam
M3	INTERFERENCE IN THIN FILM				Internal Assessment and University Exam
9	Interference in thin film of uniform thickness, conditions of maxima and minima for reflected system.	23/10/24	23/10/24	Classroom Teaching and Notes	IA-I and University Exam
10	Conditions of maxima and minima for wedge-shaped film (qualitative).	25/10/24	25/10/24	Classroom Teaching and Notes	IA-I and University Exam
11	Engineering Applications: - Newton's ring for the determination of unknown monochromatic wavelength and Refractive index of transparent liquid.	30/10/24	30/10/24	Classroom Teaching and Notes	IA-I and University Exam
12	Engineering Applications: - Anti-reflecting coating.	06/11/24	06/11/24	Classroom Teaching and Notes	IA-I and University Exam
M4	ELECTRODYNAMICS				Internal Assessment and University Exam
13	Vector calculus: Gradient, Divergence and Curl with Numericals.	08/11/24	08/11/24	Classroom Teaching and Notes	IA-II and University Exam
14	Gauss's law for electrostatics, Gauss's law for magnetostatics.	09/11/24	09/11/24	Classroom Teaching and Notes	IA-II and University Exam



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15	Ampere's circuital Law and Faraday's Law. Divergence theorem and Stokes theorem.	09/11/24	09/11/24	Classroom Teaching and Notes	IA-II and University Exam
16	Maxwell's equations in point form, integral form and their significance.	15/11/24	15/11/24	Classroom Teaching and Notes	IA-II and University Exam
M5	QUANTUM PHYSICS				Internal Assessment and University Exam
17	De-Broglie hypothesis of matter waves; de-Broglie wavelength for electron, properties of matter waves, problems of de-Broglie wavelength.	15/11/24	15/11/24	Classroom Teaching and Notes	IA-II and University Exam
18	Heisenberg's Uncertainty Principle and its applications: Non-existence of electron in the nucleus.	15/11/24	15/11/24	Classroom Teaching and Notes	IA-II and University Exam
19	Wave function and probability density, mathematical conditions for wave function, Need and significance of Schrodinger equations.	22/11/24	22/11/24	Classroom Teaching and Notes	IA-II and University Exam
20	Schrodinger time independent and time dependent equation.	23/11/24	23/11/24	Classroom Teaching, Notes and PPT	IA-II and University Exam
21	Energy of a particle enclosed in rigid box and related numerical problems	23/11/24	23/11/24	Classroom Teaching, Notes and PPT	IA-II and University Exam
22	Quantum mechanical tunneling and Principles of quantum computing: concept of Qubit	23/11/24	23/11/24	Classroom Teaching, Notes and PPT	IA-II and University Exam



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M6	SEMICONDUCTOR PHYSICS				Internal Assessment and University Exam
23	Direct & indirect band gap semiconductor, Electrical conductivity of semiconductors.	23/11/24	23/11/24	Classroom Teaching, Notes and PPT	IA-II and University Exam
24	Drift velocity, Mobility and conductivity in semiconductors.	27/11/24	27/11/24	Classroom Teaching, Notes and PPT	IA-II and University Exam
25	Fermi Dirac distribution function.	29/11/24	29/11/24	Classroom Teaching, Notes and PPT	IA-II and University Exam
26	Position of fermi level in intrinsic semiconductors and Position of fermi level in extrinsic semiconductors.	29/11/24	29/11/24	Classroom Teaching, Notes and PPT	IA-II and University Exam



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Subject / Code: Applied Physics / (BSC102)

A. Year: 2024-25

Year/ Sem: FE II **Faculty:** Vaishnavi Gurav

Div / Branch: L / CSE(DS)

Lect. No.	Topic	Planned date	Execution date	Modes of Content Delivery	Assessment Method
M1	LASER				Internal Assessment and University Exam
1	Characteristics of Lasers, Spontaneous emission and stimulated emission; metastable state, population inversion, pumping mechanism.	18/09/2024	18/09/2024	Classroom Teaching, Notes	IA-I and University Exam
2	Active medium & Active center, resonant cavity, coherence length and coherence time.	18/09/2024	23/09/2024	Classroom Teaching, Notes	IA-I and University Exam
3	Helium-Neon laser: construction and working.	25/09/2024	25/09/2024	Classroom Teaching, Notes	IA-I and University Exam
4	Application: Elementary Knowledge of LiDAR, Barcode Reader, Application of Laser in metal work.	30/09/2024	30/09/2024	Classroom Teaching, Notes and PPT	IA-I and University Exam
M2	OPTICAL FIBRE				Internal Assessment and University Exam
5	Optical Fiber: Critical angle; acceptance angle, Numerical Aperture, total internal reflection and propagation of light.	03/10/2024	07/10/2024	Classroom Teaching and Notes	IA-I and University Exam
6	Types of optical: Single mode & Multimode, Step index & Graded index fibres	03/10/2024	07/10/2024	Classroom Teaching and Notes	IA-I and University Exam



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7	Attenuation: Attenuation Coefficient and factors affecting attenuation.	09/10/2024	09/10/2024	Classroom Teaching and Notes	IA-I and University Exam
8	Fiber optic communication system, Advantages of optical fiber.	09/10/2024	09/10/2024	Classroom Teaching and Notes	IA-I and University Exam
M3	INTERFERENCE IN THIN FILM				Internal Assessment and University Exam
9	Interference in thin film of uniform thickness, conditions of maxima and minima for reflected system.	15/10/2024	14/10/2024	Classroom Teaching and Notes	IA-I and University Exam
10	Conditions of maxima and minima for wedge-shaped film (qualitative).	15/10/2024	14/10/2024	Classroom Teaching and Notes	IA-I and University Exam
11	Engineering Applications: - Newton's ring for the determination of unknown monochromatic wavelength and Refractive index of transparent liquid.	22/10/2024	16/10/2024	Classroom Teaching and Notes	IA-I and University Exam
12	Engineering Applications: - Anti-reflecting coating.	23/10/2024	16/10/2024	Classroom Teaching and Notes	IA-I and University Exam
M4	ELECTRODYNAMICS				Internal Assessment and University Exam
13	Vector calculus: Gradient, Divergence and Curl with Numericals.	05/11/2024	21/10/2024	Classroom Teaching and Notes	IA-II and University Exam
14	Gauss's law for electrostatics, Gauss's law for magnetostatics.	05/11/2024	21/10/2024	Classroom Teaching and Notes	IA-II and University Exam
15	Ampere's circuital Law and Faraday's Law. Divergence	08/11/2024	23/10/2024	Classroom Teaching and	IA-II and University



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	theorem and Stokes theorem.			Notes	Exam
16	Maxwell's equations in point form, integral form and their significance.	12/11/2024	04/10/2024	Classroom Teaching and Notes	IA-II and University Exam
M5	QUANTUM PHYSICS				Internal Assessment and University Exam
17	De-Broglie hypothesis of matter waves; de-Broglie wavelength for electron, properties of matter waves, problems of de-Broglie wavelength.	13/11/2024	04/10/2024	Classroom Teaching and Notes	IA-II and University Exam
18	Heisenberg's Uncertainty Principle and its applications: Non-existence of electron in the nucleus.	13/11/2024	06/11/2024	Classroom Teaching and Notes	IA-II and University Exam
19	Wave function and probability density, mathematical conditions for wave function, Need and significance of Schrodinger equations.	14/11/2024	11/11/2024	Classroom Teaching and Notes	IA-II and University Exam
20	Schrodinger time independent and time dependent equation.	19/11/2024	11/10/2024	Classroom Teaching, Notes and PPT	IA-II and University Exam
21	Energy of a particle enclosed in rigid box and related numerical problems	20/11/2024	13/10/2024	Classroom Teaching, Notes and PPT	IA-II and University Exam
22	Quantum mechanical tunneling and Principles of quantum computing: concept of Qubit	24/11/2024	18/10/2024	Classroom Teaching, Notes and PPT	IA-II and University Exam



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M6	SEMICONDUCTOR PHYSICS				Internal Assessment and University Exam
23	Direct & indirect band gap semiconductor, Electrical conductivity of semiconductors.	26/11/2024	26/11/2024	Classroom Teaching, Notes and PPT	IA-II and University Exam
24	Drift velocity, Mobility and conductivity in semiconductors.	26/11/2024	27/11/2024	Classroom Teaching, Notes and PPT	IA-II and University Exam
25	Fermi Dirac distribution function.	28/11/2024	30/11/2024	Classroom Teaching, Notes and PPT	IA-II and University Exam
26	Position of fermi level in intrinsic semiconductors and Position of fermi level in extrinsic semiconductors.	28/11/2024	30/11/2024	Classroom Teaching, Notes and PPT	IA-II and University Exam



Attainment Tools

In Semester evaluation:

1	Internal Assessment 1	√	8	Survey/ Case-study	
2	Internal Assessment 2	√	9	Surprise Test	
3	Assignments	√	10	Open Book Test	
4	Tutorials		11	Course Exit survey	√
5	Quiz	√	12	Term work	
6	Seminar/Presentation		13	Any other (specify)	
7	Course Projects		14	Any other (specify)	

End Semester evaluation:

1	End Semester exam		2	Practical / Oral Exam	
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Performance Indicators for assessing Course Outcomes

Assignments

Performance Indicator	Exceed Expectations (EE)	Meet Expectations (ME)	Below Expectations (BE)
Legibility (4)	<i>Very neat. Writing illustrates a lot of thought and preparation, grammatical errors.</i>	<i>Mostly neat Writing illustrates some thought and preparation, grammatical errors.</i>	<i>Not legible. Ideas expressed are difficult to understand, grammatical errors.</i>
Demonstrated Knowledge (4)	<i>Complete understanding of the questions, mathematical ideas, and processes.</i>	<i>Considerable understanding of the problem, ideas, and processes.</i>	<i>Lack of understanding for the problem.</i>
Timely submission (2)	<i>Submission before deadline specified.</i>	<i>Submission on deadline.</i>	<i>Submission after deadline.</i>

Quality of Evaluation

Analysis of last year University Exam Question Paper:

	Learning Level (Marks)					
	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating
BSC102.1						
BSC102.2						
BSC102.3						
BSC102.4						
BSC102.5						
BSC102.6						



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Evaluation Plan:

CO	Method of evaluation	Learning Level					
		Remembering	Understanding	Applying	Analyzing	Evaluating	Creating
BSC102.1	IA	2	2	-	-	-	-
	Quiz	2	2	2	-	-	-
	Assignments	2	1	2	-	-	-
BSC102.2	IA	2	2	2	-	-	-
	Quiz	2	2	2	-	-	-
	Assignments	-	-	-	-	-	-
BSC102.3	IA	2	2	3	-	-	-
	Quiz	2	2	2	-	-	-
	Assignments	2	2	2	-	-	-
BSC102.4	IA	2	1	2	-	-	-
	Quiz	2	2	2	-	-	-
	Assignments	2	3	2	-	-	-
BSC102.5	IA	2	2	2	-	-	-
	Quiz	2	2	3	-	-	-
	Assignments	2	1	3	-	-	-
BSC102.6	IA	3	2	3	-	-	-
	Quiz	3	2	2	-	-	-
	Assignments	-	-	-	-	-	-

Enter correlation level 1, 2 or 3 as defined below

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)

If there is no correlation put '—'.



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Target for CO attainment levels

CO	Previous year Target level	Is the CO attained in the previous year? (Y/N)	Calculated Target	Is target reached 2.8?	Revised target
BSC102.1			1.8	N	1.8
BSC102.2			1.8	N	1.8
BSC102.3			1.8	N	1.8
BSC102.4			1.8	N	1.8
BSC102.5			1.8	N	1.8
BSC102.6			1.8	N	1.8

Qualifier level for CO (%)

External Assessment	University Exam	52
	Oral / Practical	52
Internal Assessment	IA, Quizzes, Assignments, Experiments etc.	62
	Course Exit Survey	62

Score for Target Attainment Levels:

	1	2	3
Uni. Exam	< 52	>= 52 and < 62	>= 62
Oral/ Practical	< 52	>= 52 and < 62	>= 62
In Sem evaluation	< 62	>= 62 and < 72	>= 72
Course Exit	< 62	>= 62 and < 72	>= 72

The minimum Qualifier Level is for university exam is 52%

1. If <52% students get more than 52% marks, then score for the attainment will be 1.
2. If >=52% and <62% students get more than 52% marks, then score for the attainment will be 2.
3. If >=62% students get more than 52% marks, then score for the attainment will be 3.



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CO wise marks for In-semester and End semester Evaluation

Internal Assessment Marks

Roll No.	Name of Student ↓	Internal Assessment							
		IA1				IA2			
	CO →	CO1	CO2	CO3	Total	CO4	CO5	CO6	Total
1	ABHIJEET HALDAR	3	6	3	12	5	4	3	12
2	ABHISHEK YOGESH JAMBHALE	3	3	2	8	4	5	3	12
3	ADITYA SUNIL KUMBHAR	3	4	2	9	4	3	3	10
4	AMBADE DIXIT NAMDEO	3	4	3	10	3	3	4	10
5	AMBAVALE ADITI ARVIND	3	5	4	12	1	3	3	7
6	AMRITA MOHAN	3	4	3	10	4	4	3	11
7	ANJARLEKAR PRATHMESH HARISHCHANDRA	3	6	2	11	4	4	2	10
8	ANUJA SUBASH	3	6	3	12	4	1	2	7
9	BADGUJAR PRANJAL CHANDRASHEKHAR	3	6	2	11	4	2	3	9
10	BADHE TANVI NAMDEO	1	2	3	6	2	2	2	6
11	BANDEKAR PARTH SUDHAKAR	1	3	2	6	4	2	0	6
12	BARHATE KOMAL PANKAJ	1	5	2	8	3	1	2	6
13	BHAGIRATH NILAKSHI MANOHAR	2	4	2	8	1	0	3	4
14	BHANDAKKAR AJINKYA BHARAT	1	1	1	3	1	1	1	3
15	BHANDARY PRAJWALA VIJAY	0	3	3	6	3	0	3	6
16	BHATI MANISH SURESH	2	6	3	11	4	4	3	11
17	BHAVSAR MAITRI CHANDRAKANT	4	3	2	9	4	2	4	10
18	BHAVSAR NAMAN ATULKUMAR	2	1	2	5	1	4	2	7
19	BHIRUD YASH MINESH	3	2	1	6	4	1	3	8
20	BHORI RIDDHI ANIL	3	3	0	6	3	0	3	6
21	BHUYAL CHETAN NARESH	1	0	0	1	1	0	2	3
22	BODKE OMKAR PANDHARINATH	0	1	0	1	2	0	0	2
23	CHANDALIYA PRIYANSH PARAMVEER	1	3	2	6	3	0	3	6
24	CHATTERJEE ANIK TARUN	0	4	3	7	4	4	2	10
25	CHAUDHARI AAYUSHI BHUPENDRA	3	5	2	10	4	4	3	11
26	CHAUDHARI ADITYA VIJAY	3	1	0	4	3	3	2	8
27	CHAUDHARY UMAIR AHMAD MOHD HUSSAIN	2	5	3	10	5	2	2	9
28	CHAUHAN ALOK AWADHESH	3	5	0	8	1	2	3	6
29	CHAUHAN HARSHIT SHANKARLAL	4	2	0	6	2	2	2	6
30	CHAUHAN MONI RAJKUMAR	2	4	1	7	4	3	3	10
31	CHAVAN ARYAN KAMALAKAR	2	4	0	6	2	2	2	6
32	CHINCHOLE SHRIKANT JALBA	0	1	0	1	1	2	0	3



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33	CHORGHE VIDHI AJAY	2	6	1	9	5	4	3	12
34	CHOUDHARY SONAL BHANARAM	2	3	2	7	4	4	3	11
35	DALVI MANISH SUNIL	4	2	0	6	2	1	3	6
36	DAWANE RUTUJA PREMDAS	3	6	4	13	5	4	4	13
37	DESALE SUHANI SUHAS	3	5	1	9	1	3	3	7
38	DHUMAL ALISHA AMAR	0	2	0	2	0	0	1	1
39	GALANDE TEJAS POPAT	2	2	2	6	4	2	0	6
40	GAONKAR PURVA PANDURANG	2	4	0	6	4	3	3	10
41	GARJE TUSHAR SUNIL	2	2	2	6	4	3	0	7
42	GAWADE GAYATRI RAMKRISHNA	3	6	3	12	4	4	4	12
43	GHARAT PIYUSH BHARAT	3	0	3	6	4	0	2	6
44	GHUGARE AYUSH MARUTI	3	3	0	6	4	2	0	6
45	GHUGE ATIKSH SANDEEP	3	3	2	8	3	3	1	7
46	GOHIL JAINEEL MAHESH	3	4	0	7	2	2	2	6
47	GULBHILE MADHURI MAHADEV	2	3	3	8	5	4	4	13
48	GUPTA AARYA OMPRAKASH	2	2	2	6	4	4	3	11
49	GUPTA AMISHA SUNIL	3	5	3	11	5	3	3	11
50	GUPTA RAJ RAMPYARE	3	5	2	10	4	3	2	9
51	HARDULE PRANAY DILIRAM	2	2	2	6	4	0	2	6
52	HARIJAN AKLESH KAMLESH	3	4	3	10	3	2	4	9
53	HONSHETTE SAMBHAJI SHIVANAND	0	0	0	0	1	0	0	1
54	JABAR TANMAY ANKUSH	2	1	1	4	2	0	0	2
55	JADHAV ATHARVA PRASHANT	3	1	2	6	4	3	1	8
56	JADHAV SANSKAR MAHESH	1	5	0	6	3	0	3	6
57	JAGTAP SAMYAK SANDEEP	1	5	3	9	4	2	0	6
58	JAI DNYANESHWAR KALE	1	3	2	6	4	2	4	10
59	JAIN JAINAM DEEPAK	1	4	2	7	4	2	1	7
60	JALGAONKAR AAKANSHA PRADEEP	3	1	2	6	3	2	1	6
61	JAMDADE SAIRAJ SURESH	1	1	1	3	4	1	1	6
62	JOSHI KRISHNA CHETAN	3	3	3	9	2	2	3	7
63	KADAM MANSI SURESH	3	3	3	9	3	3	2	8
64	KADAM PRATIKA GANESH	3	2	0	5	2	2	3	7
65	KADUKAR SIDDHESH SURAJ	2	6	2	10	3	2	2	7
66	KAJOLI SHUBHAM GURUDAS	1	5	2	8	3	4	3	10
67	KAKADE HARSH VINAY	2	2	2	6	2	2	2	6
68	KAMBLE ANSH SURESH	1	2	4	7	2	3	1	6
69	KAMBLE HARSH DEEPAK	3	4	4	11	5	4	3	12
70	KAMBLE PRABODH BALAJI	2	2	1	5	3	2	2	7
71	KAMBLE RUSHIKESH RAVINDRA	2	3	3	8	4	2	2	8
72	KAMBLE SRUSHTI AKASH	4	4	2	10	4	5	3	12



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73	KAPSE TANMAY SANTOSH	3	4	2	9	4	3	3	10
74	KARALKAR DIPESH MAHESH	3	6	4	13	5	5	4	14
75	KATE ARYAN NITIN	2	5	3	10	3	3	3	9
76	KEVADIYA MEET NARSHIBHAI	2	2	1	5	4	3	0	7
77	KHAN MOHD TAHA MOHD ZUBER	2	5	3	10	4	5	0	9
78	KHAN PARVEZ LUKMAN GANI	2	3	2	7	4	2	0	6
79	KHANOLKAR ROHIT KOMAL	4	6	4	14	4	5	4	13
80	KONDUSKAR SANSKRUTI DASHRATH	2	4	1	7	1	0	1	2
81	KORDE SANKET VITHOBA	2	2	2	6	4	2	2	8
82	KULKARNI DIVIT ASHISH	3	2	0	5	3	3	1	7
83	KUMARE VED RAVINDRA	2	4	0	6	4	4	5	13
84	KURMI ARYAN SUBHASH	3	4	3	10	5	4	4	13
85	KUSHWAHA PRATIKSHA ANIL	4	6	3	13	5	5	3	13
86	KUTE YASH DASHRATH	3	2	3	8	3	5	2	10
87	KUVAR ARYAN PRAFULLA	0	0	0	0	2	2	0	4
88	LAD MADHURA PRASHIL	4	6	2	12	4	2	4	10
89	LOHAR SRUSHTI KIRAN	3	6	3	12	5	4	4	13
90	LOKARE SWAYAM MANGESH	2	4	1	7	4	1	1	6
91	MAHADIK AAYUSH BHAGWAN	2	3	1	6	2	2	3	7
92	MAHADIK MALATI SANTOSH	2	6	2	10	3	5	4	12
93	MAHAJAN NIHARIKA MUKUNDA	3	6	3	12	4	5	3	12
94	MAHALE UDAY RAMAN	2	1	2	5	4	1	2	7
95	MAKWANA YASH PIYUSH	3	6	1	10	3	0	4	7
96	MALAVADE TANISH SANDEEP	2	1	2	5	5	0	4	9
97	MANE ASAWARI ANIL	2	5	3	10	4	4	3	11
98	MANE DEEPAK VISHWAS	2	3	2	7	4	5	4	13
99	MANUSHREE MISTY	3	3	2	8	3	1	2	6
100	MEHTA MEET HITESH	3	4	1	8	2	3	4	9
101	MESTA MANTHAN HARESH	3	6	3	12	3	4	4	11
102	MHASKAR VEDANT VISHNU	1	0	0	1	0	0	0	0
103	MISHRA SHWETA ARVIND	3	4	3	10	3	3	1	7
104	MOHAMMAD SHUJA SYED ZIYARAT HUSAIN	4	6	3	13	1	4	3	8
105	MOHITE ANUSHKA VIKAS	3	2	2	7	2	3	2	7
106	MORE SANJANA SHIVAJI	3	3	3	9	4	4	3	11
107	MORE SHUBHAM DEEPAK	1	2	3	6	3	2	1	6
108	NAGRE PRATHMESH UTTAM	2	5	2	9	4	2	2	8
109	NAIK BHARGAV SUNIL	3	4	1	8	3	2	2	7
110	NAIK MANTHAN ARVIND	2	4	1	7	4	4	4	12
111	NAIK MEET NINAD	2	3	1	6	4	2	2	8
112	NAIK VEDANT SANDEEP	0	4	2	6	2	4	2	8



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113	NALANG PARTH RAMCHANDRA	1	4	1	6	1	3	2	6
114	NANDI MANNAT AMOL	3	6	3	12	4	4	2	10
115	NARE ADITYA MUKESH	2	3	2	7	2	0	3	5
116	NIKUMBHE CHINMAY RAJU	3	5	2	10	4	3	4	11
117	NIVATE HARSHAL NARAYAN	4	3	2	9	4	4	3	11
118	PALIWAL PARTH JEETENDRA	1	5	3	9	4	4	1	9
119	PANCHAL PREM LAXMIKUMAR	3	6	1	10	5	5	2	12
120	PANDEY KARAN SANJAY	3	6	4	13	4	5	4	13
121	PANERIA VIHAAN MANOJ	3	5	3	11	3	3	3	9
122	PANVALKAR VALLARI RAVIKIRAN	3	6	3	12	5	3	2	10
123	PARAB SANIYA LAXMAN	3	5	2	10	4	3	4	11
124	PASWAN ANKIT SHANKAR	3	1	2	6	4	0	2	6
125	PATADIA OM RUPAL	3	5	2	10	2	4	2	8
126	PATEL ASHISH RAMESH	3	6	3	12	3	2	4	9
127	PATEL HETVI PIYUSH	2	4	3	9	5	1	4	10
128	PATEL MOKSH DAXESH	2	4	2	8	3	0	3	6
129	PATEL YASHIKA SUNIL	1	2	3	6	5	1	2	8
130	PATIL AAKANSHA ANKUSH	1	5	2	8	3	0	1	4
131	PATIL DHANASHREE LILADHAR	1	4	2	7	3	2	3	8
132	PATIL JAY VIJAY	0	4	1	5	1	1	0	2
133	PATIL KARAN PANKAJ	1	2	2	5	3	2	2	7
134	PATIL KHUSHAL SANTOSH	2	4	3	9	5	4	4	13
135	PETHKAR OM	3	3	0	6	2	2	2	6
136	BHASKER SANIL YASH	4	5	4	13	3	2	5	10
137	DEDHIA YASH	3	6	2	11	5	3	2	10
138	DESAI GAURI SANTOSH	3	6	4	13	5	4	4	13
139	KANOJIYA OM SURYABHAN	4	6	4	14	5	5	1	11
140	KARPE SAHIL VIKAS	4	6	3	13	5	3	5	13
141	LAKHANI PARV SANJAY KUMAR	2	2	3	7	3	3	2	8
142	MORE SWANIK NILESH	2	3	1	6	0	2	4	6
143	PATIL LUV ASHOK	2	4	0	6	3	5	0	8
144	PATIL MANASVI RATNAKAR	3	3	2	8	5	3	4	12
145	PATIL PRANJAL MAHENDRA	4	0	2	6	5	3	1	9
146	PATIL SANDHVI KANTI	2	5	4	11	3	3	4	10
147	PATIL SHWETA ASHOK	4	5	3	12	5	5	3	13
148	PATIL SUPRIYA SANTOSH	2	3	2	7	2	3	3	8
149	PATIL SWARAJ RAJENDRA	1	3	2	6	2	0	4	6
150	PAWAR SHUBHAM SUNIL	1	1	5	7	5	0	2	7
151	PAWAR SWARAJ RAJENDRA	1	4	2	7	5	2	2	9
152	PENDHARKAR YASH DEEPAK	1	3	2	6	5	4	5	14
153	PINJARI REHAN LATIF	2	3	1	6	4	4	1	9



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154	POOJARY SINCHANA GOPAL	2	6	4	12	5	5	2	12
155	PRAJAPATI SUMIT PRATAP	4	6	0	10	5	4	2	11
156	RAJAK AADITYA RAVI	4	6	4	14	3	5	3	11
157	RANE SAHIL SURESH	4	6	4	14	5	5	5	15
158	RATHOD RAHUL BALIRAM	2	4	3	9	4	2	2	8
159	RATNE ROHAN GANESH	2	5	2	9	2	4	3	9
160	RAUT ALISHA SHEKHAR	2	2	2	6	4	4	2	10
161	RAUT MAYANK ANKUSH	3	5	3	11	3	1	0	4
162	RAUT RUDRA RAKESH	1	5	3	9	2	3	2	7
163	RAUT SOHAM KIRTIKUMAR	2	2	2	6	5	3	3	11
164	RAVALE PRATIK RANGNATH	3	5	4	12	5	5	5	15
165	SALGAONKAR DAKSHATA CHANDRAKANT	4	6	4	14	5	4	2	11
166	SALUNKHE SANSKAR VIRENDRA	3	6	2	11	5	2	1	8
167	SAWANT ESHA MAHESH	1	6	3	10	2	2	5	9
168	SAWANT MAITHILI NILESH	4	6	4	14	4	4	5	13
169	SAWANT RISHIKESH KISHOR	2	3	1	6	3	0	3	6
170	SAWANT SAMAR SANTOSH	0	6	2	8	2	3	2	7
171	SAWANT SHREYA AMIT	5	6	4	15	5	5	5	15
172	SAWANT SUMRITA SUKHADEO	4	5	3	12	2	4	4	10
173	SENTA VISHAL VIJAYBHAI	2	3	2	7	5	4	5	14
174	SHAH AAYUSH RAJKUMAR	2	4	2	8	5	4	4	13
175	SHAIKH RIYAAN AKEELAHMED	0	5	2	7	5	1	1	7
176	SHARMA RAJ BABLU	2	6	3	11	5	5	5	15
177	SHAW PRALAYANKAR SHEOPRASAD	2	5	2	9	3	4	2	9
178	SHETTIGAR TEJAS SATHISH	4	2	2	8	5	2	1	8
179	SHETTY PRANISH HARISH	2	3	2	7	4	2	3	9
180	SINGH ANTARIKSH ARJUN	4	5	3	12	4	2	5	11
181	SINGH ARYAN SURYAPRAKASH	2	4	1	7	4	4	2	10
182	SINGH RISHU MANOJ	4	6	3	13	5	5	4	14
183	SINGH SHUBHANSHU ARVIND KUMAR	2	6	4	12	2	3	4	9
184	SONDIGALA HARSH RAJUBHAI	1	3	3	7	5	5	5	15
185	TALEKAR JAY CHANDRASEN	4	6	3	13	5	5	5	15
186	TALIKOTE SANSKARDEEP BALAJI	0	1	0	1	2	0	2	4
187	TAYADE SOHAM RAJENDRA	4	5	3	12	5	5	3	13
188	THAKUR SANIKA AVINASH	3	6	2	11	5	5	4	14
189	THAKUR URVI VIVEK	3	3	2	8	4	1	1	6
190	THOSAR SHLOK ABHIJIT	0	4	2	6	3	1	3	7
191	TIWARI CHANDAN VIJAY	3	1	3	7	5	2	4	11
192	TIWARI MAHEK TRIPURARI	4	4	4	12	3	0	5	8



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193	VAIDYA PARTH NILESH	3	6	1	10	5	0	5	10
194	VAITY RUGVED NILESH	2	4	1	7	3	2	1	6
195	VANARASE PARAS KAMLESH	4	6	4	14	5	5	5	15
196	VARAK PRAFUL BABYA	3	5	3	11	5	2	4	11
197	VARIA NAMAN VIMAL	3	5	2	10	5	4	5	14
198	VAZE NEHALI NITIN	2	1	3	6	4	1	2	7
199	VICHARE KAVYA MAHESH	2	6	4	12	5	5	4	14
200	VISHWAKARMA SUMIT KANHAIYALAL	4	6	4	14	5	5	5	15
201	WAKPAIJAN SANIA PRASHANT	4	6	4	14	5	5	4	14
202	YADAV DEEPAKKUMAR AWADHRAJ	3	5	4	12	5	3	4	12
203	YADAV KRISHNA ANIL	0	4	2	6	5	2	4	11
204	YADAV PRITI RAJU	3	5	2	10	2	2	3	7

Summary

Total No. of Students	204								
Total Present	204								
Qualifier Level (%)	64	64	64		64	64	64		
Total Marks	5	6	4		5	5	5		
Qualifier Level in terms of marks	3.2	3.84	2.56		3.2	3.2	3.2		
No. of Students above Qualifier Level	30	123	82		118	73	60		
% No. of Students above Qualifier Level	14.71	60.29	40.20		57.84	35.78	29.41		
Attainment level	1	2	1		1	1	1		



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In Semester Evaluation (Quizzes and Assignments Marks)

Roll No	Name of the student	Quizzes						Assignments			
		Q1	Q 2	Q 3	Q 4	Q 5	Q 6	A 1	A 2	A 3	A4
		BSC102.1	BSC102.2	BSC102.3	BSC102.4	BSC102.5	BSC102.6	BSC102.1	BSC102.3	BSC102.4	BSC102.5
1	ABHIJEET HALDAR	9	10	9	9	10	10	9	9	7	9
2	ABHISHEK YOGESH JAMBHALE	10	9	10	10	9	9	9	9	8	9
3	ADITYA SUNIL KUMBHAR	9	9	9	9	9	9	9	8	9	6
4	AMBADE DIXIT NAMDEO	9	9	10	10	10	9	9	8	6	6
5	AMBAVALE ADITI ARVIND	9	9	9	9	9	9	9	9	7	9
6	AMRITA MOHAN	10	9	10	9	10	9	9	8	9	9
7	ANJARLEKAR PRATHMESH HARISHCHANDRA	10	10	9	9	10	10	9	8	9	9
8	ANUJA SUBASH	9	9	9	9	9	9	8	8	8	8
9	BADGUJAR PRANJAL CHANDRASHEKHAR	9	9	10	10	9	10	9	9	7	10
10	BADHE TANVI NAMDEO	6	9	6	9	7	9	7	7	6	7
11	BANDEKAR PARTH SUDHAKAR	9	9	9	9	9	9	9	9	8	7
12	BARHATE KOMAL PANKAJ	9	9	9	9	9	9	8	8	9	8
13	BHAGIRATH NILAKSHI MANOHAR	9	9	9	9	9	9	9	9	7	8
14	BHANDAKKAR AJINKYA BHARAT	9	9	9	9	9	9	9	7	9	8
15	BHANDARY PRAJWALA VIJAY	9	9	9	9	9	9	8	8	8	9
16	BHATI MANISH SURESH	10	9	10	10	0	9	9	9	9	9
17	BHAVSAR MAITRI CHANDRAKANT	9	9	9	9	9	9	9	9	9	8
18	BHAVSAR NAMAN ATULKUMAR	9	9	9	9	9	9	9	8	5	8
19	BHIRUD YASH MINESH	9	9	9	9	9	9	9	9	9	8
20	BHORI RIDDHI ANIL	9	9	9	9	9	9	8	8	6	8
21	BHUYAL CHETAN NARESH	9	9	9	9	9	9	6	6	8	8
22	BODKE OMKAR PANDHARINATH	9	9	9	9	9	9	7	6	7	10
23	CHANDALIYA PRIYANSH PARAMVEER	9	9	9	9	9	9	8	8	8	7
24	CHATTERJEE ANIK TARUN	10	9	10	10	9	9	9	9	9	9



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25	CHAUDHARI AAYUSHI BHUPENDRA	9	10	9	10	8	9	8	9	7	9
26	CHAUDHARI ADITYA VIJAY	9	9	9	9	9	9	8	8	8	8
27	CHAUDHARY UMAIR AHMAD MOHD HUSSAIN	8	9	8	9	10	9	9	9	8	9
28	CHAUHAN ALOK AWADHESH	9	9	9	9	9	9	8	8	8	8
29	CHAUHAN HARSHIT SHANKARLAL	9	9	9	9	9	9	7	8	6	9
30	CHAUHAN MONI RAJKUMAR	10	9	10	9	7	9	9	9	7	9
31	CHAVAN ARYAN KAMALAKAR	9	9	9	9	9	9	7	7	7	6
32	CHINCHOLE SHRIKANT JALBA	9	9	7	5	8	7	8	8	8	6
33	CHORGHE VIDHI AJAY	10	10	9	10	9	7	9	8	9	9
34	CHOUDHARY SONAL BHANARAM	9	10	9	7	10	9	9	9	9	9
35	DALVI MANISH SUNIL	8	9	7	9	7	8	7	7	5	9
36	DAWANE RUTUJA PREMDAS	10	10	9	9	9	8	9	9	9	8
37	DESALE SUHANI SUHAS	9	9	9	9	9	9	9	8	9	10
38	DHUMAL ALISHA AMAR	9	9	9	9	9	9	8	7	7	7
39	GALANDE TEJAS POPAT	9	9	9	9	9	9	6	6	6	7
40	GAONKAR PURVA PANDURANG	9	10	7	9	8	9	9	9	8	8
41	GARJE TUSHAR SUNIL	9	9	9	9	9	9	7	8	8	8
42	GAWADE GAYATRI RAMKRISHNA	10	10	9	10	8	9	9	9	9	8
43	GHARAT PIYUSH BHARAT	8	9	8	9	7	9	8	7	8	9
44	GHUGARE AYUSH MARUTI	9	8	7	7	7	9	7	8	7	9
45	GHUGE ATIKSH SANDEEP	9	9	8	9	10	9	9	8	7	8
46	GOHIL JAINEEL MAHESH	7	9	9	7	9	9	7	7	7	8
47	GULBHILE MADHURI MAHADEV	9	10	9	10	10	9	9	9	8	8
48	GUPTA AARYA OMPRAKASH	9	8	9	9	9	8	8	8	6	8
49	GUPTA AMISHA SUNIL	9	9	9	7	9	7	9	9	9	8
50	GUPTA RAJ RAMPYARE	10	9	9	10	10	9	9	9	8	10
51	HARDULE PRANAY DILIRAM	9	7	8	8	8	7	7	6	7	7
52	HARIJAN AKLESH KAMLESH	8	9	8	7	7	8	8	9	8	9
53	HONSHETTE SAMBHAJI SHIVANAND	6	5	7	6	5	6	5	7	8	9



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54	JABAR TANMAY ANKUSH	7	5	6	9	8	7	6	5	7	8
55	JADHAV ATHARVA PRASHANT	9	8	9	8	8	9	8	6	7	9
56	JADHAV SANSKAR MAHESH	9	9	9	9	9	9	9	5	8	8
57	JAGTAP SAMYAK SANDEEP	10	8	9	10	9	8	9	8	7	9
58	JAI DNYANESHWAR KALE	9	8	9	10	9	8	7	8	8	9
59	JAIN JAINAM DEEPAK	9	8	7	9	9	7	8	8	7	6
60	JALGAONKAR AAKANSHA PRADEEP	7	8	7	7	7	6	7	8	7	6
61	JAMDADE SAIRAJ SURESH	9	7	9	7	7	8	6	7	7	9
62	JOSHI KRISHNA CHETAN	10	10	9	10	9	9	9	9	9	9
63	KADAM MANSI SURESH	10	7	10	9	7	9	7	8	7	9
64	KADAM PRATIKA GANESH	9	8	9	10	7	9	7	5	8	8
65	KADUKAR SIDDHESH SURAJ	8	9	10	7	10	9	6	7	8	10
66	KAJOLI SHUBHAM GURUDAS	9	10	10	9	8	8	7	6	8	7
67	KAKADE HARSH VINAY	7	8	6	6	7	10	8	8	7	7
68	KAMBLE ANSH SURESH	7	9	7	9	8	9	8	8	7	8
69	KAMBLE HARSH DEEPAK	9	9	9	9	9	9	9	9	6	8
70	KAMBLE PRABODH BALAJI	5	8	9	9	9	9	9	5	9	8
71	KAMBLE RUSHIKESH RAVINDRA	9	9	8	8	9	8	8	9	5	9
72	KAMBLE SRUSHTI AKASH	9	5	9	9	5	9	9	9	9	9
73	KAPSE TANMAY SANTOSH	9	8	9	9	9	9	9	9	5	8
74	KARALKAR DIPESH MAHESH	9	9	8	9	6	8	8	9	9	8
75	KATE ARYAN NITIN	9	9	9	7	9	9	9	9	5	8
76	KEVADIYA MEET NARSHIBHAI	9	9	9	6	8	9	9	9	5	8
77	KHAN MOHD TAHA MOHD ZUBER	8	9	6	9	9	6	6	8	8	8
78	KHAN PARVEZ LUKMAN GANI	8	5	7	9	9	5	7	8	9	10
79	KHANOLKAR ROHIT KOMAL	9	9	9	9	9	9	9	9	9	7
80	KONDUSKAR SANSKRUTI DASHRATH	7	6	8	5	5	6	8	9	8	9
81	KORDE SANKET VITHOBA	9	5	9	9	6	5	9	9	8	9
82	KULKARNI DIVIT ASHISH	9	9	8	8	9	9	8	9	9	8



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112	NAIK VEDANT SANDEEP	9	9	5	8	5	8	8	9	9	8
113	NALANG PARTH RAMCHANDRA	9	9	9	9	9	7	7	9	9	9
114	NANDI MANNAT AMOL	9	6	5	8	9	9	9	9	9	9
115	NARE ADITYA MUKESH	9	9	5	9	9	8	8	9	7	6
116	NIKUMBHE CHINMAY RAJU	9	9	8	5	8	9	9	9	9	6
117	NIVATE HARSHAL NARAYAN	5	9	9	9	7	6	6	5	9	9
118	PALIWAL PARTH JEETENDRA	9	8	9	8	5	6	6	9	9	9
119	PANCHAL PREM LAXMIKUMAR	9	9	8	8	5	9	9	9	9	9
120	PANDEY KARAN SANJAY	9	9	8	9	9	9	9	9	8	8
121	PANERIA VIHAAN MANOJ	9	9	9	5	9	9	9	9	9	10
122	PANVALKAR VALLARI RAVIKIRAN	5	9	9	6	9	8	8	5	9	7
123	PARAB SANIYA LAXMAN	8	6	9	6	7	9	9	8	9	7
124	PASWAN ANKIT SHANKAR	9	9	5	7	9	5	5	9	8	8
125	PATADIA OM RUPAL	9	9	9	9	9	5	5	9	9	8
126	PATEL ASHISH RAMESH	9	8	9	9	5	8	8	9	9	8
127	PATEL HETVI PIYUSH	7	6	7	7	5	5	5	7	8	9
128	PATEL MOKSH DAXESH	9	8	9	9	9	9	9	9	8	9
129	PATEL YASHIKA SUNIL	9	9	7	9	8	9	9	9	9	8
130	PATIL AAKANSHA ANKUSH	9	9	9	9	9	9	9	9	9	8
131	PATIL DHANASHREE LILADHAR	8	9	5	4	6	8	8	9	5	8
132	PATIL JAY VIJAY	9	9	9	9	9	9	9	9	9	8
133	PATIL KARAN PANKAJ	9	9	5	5	9	9	9	9	9	8
134	PATIL KHUSHAL SANTOSH	9	9	9	9	9	9	9	9	5	10
135	PETHKAR OM	7	9	5	8	9	9	9	7	5	7
136	BHASKER SANIL YASH	10	10	10	10	10	10	8	8	8	9
137	DEDHIA YASH	10	10	10	10	10	10	10	10	9	9
138	DESAI GAURI SANTOSH	10	10	10	10	10	10	7	8	7	8
139	KANOJIYA OM SURYABHAN	10	10	10	10	10	10	8	7	8	9
140	KARPE SAHIL VIKAS	10	10	10	10	10	10	6	7	6	8



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141	LAKHANI PARV SANJAY KUMAR	10	10	10	10	10	10	7	7	7	9
142	MORE SWANIK NILESH	10	10	10	10	10	10	6	6	6	9
143	PATIL LUV ASHOK	10	8	10	8	9	10	10	10	10	6
144	PATIL MANASVI RATNAKAR	10	10	10	10	10	10	10	10	10	6
145	PATIL PRANJAL MAHENDRA	9	8	7	7	9	8	9	8	7	9
146	PATIL SANDHVI KANTI	10	10	10	10	10	10	8	8	8	9
147	PATIL SHWETA ASHOK	10	10	10	10	10	10	8	8	8	9
148	PATIL SUPRIYA SANTOSH	7	10	8	9	9	10	7	7	7	8
149	PATIL SWARAJ RAJENDRA	7	10	9	7	8	10	8	8	9	10
150	PAWAR SHUBHAM SUNIL	10	7	10	8	10	9	7	7	9	7
151	PAWAR SWARAJ RAJENDRA	10	7	10	8	10	8	10	10	10	7
152	PENDHARKAR YASH DEEPAK	10	10	10	10	10	10	6	7	6	8
153	PINJARI REHAN LATIF	7	8	10	8	8	10	8	8	7	8
154	POOJARY SINCHANA GOPAL	10	10	10	10	10	10	8	7	8	8
155	PRAJAPATI SUMIT PRATAP	7	10	7	10	7	10	7	7	7	9
156	RAJAK AADITYA RAVI	10	10	10	10	10	10	7	7	7	9
157	RANE SAHIL SURESH	10	10	10	10	10	10	9	8	10	8
158	RATHOD RAHUL BALIRAM	8	10	8	10	8	10	7	7	7	8
159	RATNE ROHAN GANESH	7	10	8	10	10	7	7	7	7	8
160	RAUT ALISHA SHEKHAR	8	10	7	10	8	10	9	8	10	8
161	RAUT MAYANK ANKUSH	8	10	7	10	8	10	7	7	7	8
162	RAUT RUDRA RAKESH	7	10	8	8	8	10	9	10	9	10
163	RAUT SOHAM KIRTIKUMAR	8	10	9	10	8	10	10	8	10	7
164	RAVALE PRATIK RANGNATH	10	10	10	10	10	10	7	7	8	9
165	SALGAONKAR DAKSHATA CHANDRAKANT	10	10	10	10	10	10	7	7	7	9
166	SALUNKHE SANSKAR VIRENDRA	8	10	8	10	8	10	7	7	6	8
167	SAWANT ESHA MAHESH	9	10	8	10	8	10	9	8	10	9
168	SAWANT MAITHILI NILESH	10	10	10	10	10	10	8	7	9	8
169	SAWANT RISHIKESH KISHOR	7	10	8	10	7	7	6	7	6	9



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170	SAWANT SAMAR SANTOSH	7	10	8	10	7	10	7	7	7	9
171	SAWANT SHREYA AMIT	10	10	10	10	10	10	8	8	7	6
172	SAWANT SUMRITA SUKHADEO	10	10	8	10	10	7	7	7	8	6
173	SENTA VISHAL VIJAYBHAI	7	10	8	10	10	10	8	7	8	9
174	SHAH AAYUSH RAJKUMAR	10	10	10	10	10	10	7	8	8	9
175	SHAIKH RIYAAN AKEELAHMED	10	10	10	10	10	10	8	8	8	9
176	SHARMA RAJ BABLU	10	10	10	10	10	10	9	10	10	8
177	SHAW PRALAYANKAR SHEOPRASAD	10	10	10	10	10	10	8	8	7	10
178	SHETTIGAR TEJAS SATHISH	10	10	10	10	10	10	10	10	9	7
179	SHETTY PRANISH HARISH	10	10	10	10	10	10	6	6	6	7
180	SINGH ANTARIKSH ARJUN	10	10	10	10	10	10	9	9	6	8
181	SINGH ARYAN SURYAPRAKASH	10	10	10	10	10	10	7	6	7	8
182	SINGH RISHU MANOJ	10	10	10	10	10	10	8	8	7	8
183	SINGH SHUBHANSHU ARVIND KUMAR	10	7	8	10	8	10	9	7	8	9
184	SONDIGALA HARSH RAJUBHAI	10	10	10	10	10	10	7	8	8	9
185	TALEKAR JAY CHANDRASEN	10	10	10	10	10	10	10	10	10	8
186	TALIKOTE SANSKARDEEP BALAJI	7	10	8	10	8	10	8	7	7	8
187	TAYADE SOHAM RAJENDRA	10	10	10	10	10	10	8	8	7	8
188	THAKUR SANIKA AVINASH	8	10	8	10	10	10	8	7	8	8
189	THAKUR URVI VIVEK	7	10	7	10	7	6	8	7	7	8
190	THOSAR SHLOK ABHIJIT	6	6	6	6	6	6	8	7	8	10
191	TIWARI CHANDAN VIJAY	8	10	7	10	7	10	9	9	9	7
192	TIWARI MAHEK TRIPURARI	10	8	10	7	10	7	9	9	9	9
193	VAIDYA PARTH NILESH	7	8	10	8	10	9	7	8	7	9
194	VAITY RUGVED NILESH	10	7	10	8	10	9	8	8	9	8
195	VANARASE PARAS KAMLESH	10	10	10	10	10	10	8	8	9	9
196	VARAK PRAFUL BABYA	9	10	8	10	7	10	9	8	7	8
197	VARIA NAMAN VIMAL	10	10	10	10	10	10	7	8	8	9
198	VAZE NEHALI NITIN	7	10	7	10	10	8	10	10	10	9



199	VICHARE KAVYA MAHESH	10	10	10	10	10	10	8	8	8	6
200	VISHWAKARMA SUMIT KANHAIYALAL	10	10	10	10	10	10	8	9	9	6
201	WAKPAIJAN SANIA PRASHANT	10	10	10	10	10	10	10	10	10	9
202	YADAV DEEPAKKUMAR AWADHRAJ	10	10	10	10	10	10	8	7	8	9
203	YADAV KRISHNA ANIL	10	10	10	10	10	10	8	10	8	9
204	YADAV PRITI RAJU	7	8	10	8	10	7	7	8	10	8

[illegible]



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End Semester Evaluation (University Exam Marks)

Roll No	Name of the student	University Exam Marks
1	ABHIJEET HALDAR	26
2	ABHISHEK YOGESH JAMBHALE	25
3	ADITYA SUNIL KUMBHAR	24
4	AMBADE DIXIT NAMDEO	18
5	AMBAVALE ADITI ARVIND	27
6	AMRITA MOHAN	43
7	ANJARLEKAR PRATHMESH HARISHCHANDRA	20
8	ANUJA SUBASH	25
9	BADGUJAR PRANJAL CHANDRASHEKHAR	29
10	BADHE TANVI NAMDEO	18
11	BANDEKAR PARTH SUDHAKAR	19
12	BARHATE KOMAL PANKAJ	26
13	BHAGIRATH NILAKSHI MANOHAR	18
14	BHANDAKKAR AJINKYA BHARAT	18
15	BHANDARY PRAJWALA VIJAY	19
16	BHATI MANISH SURESH	23
17	BHAVSAR MAITRI CHANDRAKANT	19
18	BHAVSAR NAMAN ATULKUMAR	19
19	BHIRUD YASH MINESH	19
20	BHORI RIDDHI ANIL	20
21	BHUYAL CHETAN NARESH	19
22	BODKE OMKAR PANDHARINATH	18
23	CHANDALIYA PRIYANSH PARAMVEER	18
24	CHATTERJEE ANIK TARUN	23
25	CHAUDHARI AAYUSHI BHUPENDRA	30
26	CHAUDHARI ADITYA VIJAY	26
27	CHAUDHARY UMAIR AHMAD MOHD HUSSAIN	20
28	CHAUHAN ALOK AWADHESH	27
29	CHAUHAN HARSHIT SHANKARLAL	29
30	CHAUHAN MONI RAJKUMAR	25



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31	CHAVAN ARYAN KAMALAKAR	18
32	CHINCHOLE SHRIKANT JALBA	18
33	CHORGHE VIDHI AJAY	31
34	CHOUDHARY SONAL BHANARAM	30
35	DALVI MANISH SUNIL	22
36	DAWANE RUTUJA PREMDAS	41
37	DESALE SUHANI SUHAS	30
38	DHUMAL ALISHA AMAR	18
39	GALANDE TEJAS POPAT	18
40	GAONKAR PURVA PANDURANG	19
41	GARJE TUSHAR SUNIL	24
42	GAWADE GAYATRI RAMKRISHNA	31
43	GHARAT PIYUSH BHARAT	10
44	GHUGARE AYUSH MARUTI	18
45	GHUGE ATIKSH SANDEEP	18
46	GOHIL JAINEEL MAHESH	21
47	GULBHILE MADHURI MAHADEV	22
48	GUPTA AARYA OMPRAKASH	24
49	GUPTA AMISHA SUNIL	28
50	GUPTA RAJ RAMPYARE	26
51	HARDULE PRANAY DILIRAM	15
52	HARIJAN AKLESH KAMLESH	23
53	HONSHETTE SAMBHAJI SHIVANAND	13
54	JABAR TANMAY ANKUSH	11
55	JADHAV ATHARVA PRASHANT	19
56	JADHAV SANSKAR MAHESH	18
57	JAGTAP SAMYAK SANDEEP	19
58	JAI DNYANESHWAR KALE	22
59	JAIN JAINAM DEEPAK	23
60	JALGAONKAR AAKANSHA PRADEEP	12
61	JAMDADE SAIRAJ SURESH	18
62	JOSHI KRISHNA CHETAN	15
63	KADAM MANSI SURESH	25
64	KADAM PRATIKA GANESH	22
65	KADUKAR SIDDHESH SURAJ	26
66	KAJOLI SHUBHAM GURUDAS	21
67	KAKADE HARSH VINAY	18
68	KAMBLE ANSH SURESH	22
69	KAMBLE HARSH DEEPAK	27
70	KAMBLE PRABODH BALAJI	25



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71	KAMBLE RUSHIKESH RAVINDRA	25
72	KAMBLE SRUSHTI AKASH	19
73	KAPSE TANMAY SANTOSH	25
74	KARALKAR DIPESH MAHESH	22
75	KATE ARYAN NITIN	18
76	KEVADIYA MEET NARSHIBHAI	18
77	KHAN MOHD TAHA MOHD ZUBER	22
78	KHAN PARVEZ LUKMAN GANI	11
79	KHANOLKAR ROHIT KOMAL	32
80	KONDUSKAR SANSKRUTI DASHRATH	22
81	KORDE SANKET VITHOBA	19
82	KULKARNI DIVIT ASHISH	18
83	KUMARE VED RAVINDRA	25
84	KURMI ARYAN SUBHASH	30
85	KUSHWAHA PRATIKSHA ANIL	21
86	KUTE YASH DASHRATH	18
87	KUVAR ARYAN PRAFULLA	11
88	LAD MADHURA PRASHIL	28
89	LOHAR SRUSHTI KIRAN	18
90	LOKARE SWAYAM MANGESH	19
91	MAHADIK AAYUSH BHAGWAN	27
92	MAHADIK MALATI SANTOSH	32
93	MAHAJAN NIHARIKA MUKUNDA	24
94	MAHALE UDAY RAMAN	18
95	MAKWANA YASH PIYUSH	20
96	MALAVADE TANISH SANDEEP	11
97	MANE ASAWARI ANIL	30
98	MANE DEEPAK VISHWAS	27
99	MANUSHREE MISTY	26
100	MEHTA MEET HITESH	24
101	MESTA MANTHAN HARESH	24
102	MHASKAR VEDANT VISHNU	3
103	MISHRA SHWETA ARVIND	32
104	MOHAMMAD SHUJA SYED ZIYARAT HUSAIN	18
105	MOHITE ANUSHKA VIKAS	25
106	MORE SANJANA SHIVAJI	24
107	MORE SHUBHAM DEEPAK	18
108	NAGRE PRATHMESH UTTAM	21
109	NAIK BHARGAV SUNIL	24
110	NAIK MANTHAN ARVIND	28



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111	NAIK MEET NINAD	18
112	NAIK VEDANT SANDEEP	28
113	NALANG PARTH RAMCHANDRA	25
114	NANDI MANNAT AMOL	35
115	NARE ADITYA MUKESH	18
116	NIKUMBHE CHINMAY RAJU	29
117	NIVATE HARSHAL NARAYAN	26
118	PALIWAL PARTH JEETENDRA	18
119	PANCHAL PREM LAXMIKUMAR	24
120	PANDEY KARAN SANJAY	28
121	PANERIA VIHAAN MANOJ	19
122	PANVALKAR VALLARI RAVIKIRAN	27
123	PARAB SANIYA LAXMAN	33
124	PASWAN ANKIT SHANKAR	18
125	PATADIA OM RUPAL	23
126	PATEL ASHISH RAMESH	13
127	PATEL HETVI PIYUSH	23
128	PATEL MOKSH DAXESH	24
129	PATEL YASHIKA SUNIL	15
130	PATIL AAKANSHA ANKUSH	28
131	PATIL DHANASHREE LILADHAR	32
132	PATIL JAY VIJAY	7
133	PATIL KARAN PANKAJ	13
134	PATIL KHUSHAL SANTOSH	33
135	PETHKAR OM	24
136	BHASKER SANIL YASH	13
137	DEDHIA YASH	23
138	DESAI GAURI SANTOSH	27
139	KANOJIYA OM SURYABHAN	27
140	KARPE SAHIL VIKAS	36
141	LAKHANI PARV SANJAY KUMAR	30
142	MORE SWANIK NILESH	6
143	PATIL LUV ASHOK	7
144	PATIL MANASVI RATNAKAR	11
145	PATIL PRANJAL MAHENDRA	8
146	PATIL SANDHVI KANTI	20
147	PATIL SHWETA ASHOK	24
148	PATIL SUPRIYA SANTOSH	19
149	PATIL SWARAJ RAJENDRA	19
150	PAWAR SHUBHAM SUNIL	13



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151	PAWAR SWARAJ RAJENDRA	18
152	PENDHARKAR YASH DEEPAK	20
153	PINJARI REHAN LATIF	19
154	POOJARY SINCHANA GOPAL	27
155	PRAJAPATI SUMIT PRATAP	21
156	RAJAK AADITYA RAVI	23
157	RANE SAHIL SURESH	34
158	RATHOD RAHUL BALIRAM	27
159	RATNE ROHAN GANESH	22
160	RAUT ALISHA SHEKHAR	24
161	RAUT MAYANK ANKUSH	18
162	RAUT RUDRA RAKESH	18
163	RAUT SOHAM KIRTIKUMAR	21
164	RAVALE PRATIK RANGNATH	24
165	SALGAONKAR DAKSHATA CHANDRAKANT	28
166	SALUNKHE SANSKAR VIRENDRA	28
167	SAWANT ESHA MAHESH	18
168	SAWANT MAITHILI NILESH	37
169	SAWANT RISHIKESH KISHOR	15
170	SAWANT SAMAR SANTOSH	23
171	SAWANT SHREYA AMIT	33
172	SAWANT SUMRITA SUKHADEO	18
173	SENTA VISHAL VIJAYBHAI	25
174	SHAH AAYUSH RAJKUMAR	28
175	SHAIKH RIYAAN AKEELAHMED	18
176	SHARMA RAJ BABLU	37
177	SHAW PRALAYANKAR SHEOPRASAD	15
178	SHETTIGAR TEJAS SATHISH	25
179	SHETTY PRANISH HARISH	18
180	SINGH ANTARIKSH ARJUN	37
181	SINGH ARYAN SURYAPRAKASH	19
182	SINGH RISHU MANOJ	28
183	SINGH SHUBHANSHU ARVIND KUMAR	24
184	SONDIGALA HARSH RAJUBHAI	30
185	TALEKAR JAY CHANDRASEN	26
186	TALIKOTE SANSKARDEEP BALAJI	13
187	TAYADE SOHAM RAJENDRA	27
188	THAKUR SANIKA AVINASH	33
189	THAKUR URVI VIVEK	18
190	THOSAR SHLOK ABHIJIT	18



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191	TIWARI CHANDAN VIJAY	23
192	TIWARI MAHEK TRIPURARI	19
193	VAIDYA PARTH NILESH	28
194	VAITY RUGVED NILESH	18
195	VANARASE PARAS KAMLESH	39
196	VARAK PRAFUL BABYA	25
197	VARIA NAMAN VIMAL	25
198	VAZE NEHALI NITIN	19
199	VICHARE KAVYA MAHESH	30
200	VISHWAKARMA SUMIT KANHAIYALAL	27
201	WAKPAIJAN SANIA PRASHANT	34
202	YADAV DEEPAKKUMAR AWADHRAJ	26
203	YADAV KRISHNA ANIL	9
204	YADAV PRITI RAJU	20

Summary

Total No. of Students	204
Total Present	204
Qualifier Level (%)	54
Total Marks	45
Qualifier Level in terms of marks	24.3
No. of Students above Qualifier Level	77
% No. of Students above Qualifier Level	37.75
Attainment level	1.0



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First Year Engineering

End Semester Evaluation (Course Exit Survey)

Roll No	Name of the student	(Theory Course Exit Survey)					
		BSC102.1	BSC102.2	BSC102.3	BSC102.4	BSC102.5	BSC102.6
1	ABHIJEET HALDAR	5	5	5	5	5	4
2	ABHISHEK YOGESH JAMBHALE	5	4	4	5	5	5
3	ADITYA SUNIL KUMBHAR	5	5	4	5	5	5
4	AMBADE DIXIT NAMDEO	5	4	4	5	5	5
5	AMBAVALE ADITI ARVIND	5	5	5	5	4	4
6	AMRITA MOHAN	5	5	5	5	5	5
7	ANJARLEKAR PRATHMESH HARISHCHANDRA	5	4	5	5	5	5
8	ANUJA SUBASH	3	5	5	4	5	3
9	BADGUJAR PRANJAL CHANDRASHEKHAR	4	4	3	4	3	3
10	BADHE TANVI NAMDEO	5	5	5	4	5	5
11	BANDEKAR PARTH SUDHAKAR	3	5	5	5	4	4
12	BARHATE KOMAL PANKAJ	5	5	5	3	5	5
13	BHAGIRATH NILAKSHI MANOHAR	5	4	3	5	5	3
14	BHANDAKKAR AJINKYA BHARAT	4	5	5	4	4	5
15	BHANDARY PRAJWALA VIJAY	4	4	5	5	5	5
16	BHATI MANISH SURESH	5	5	5	4	4	5
17	BHAVSAR MAITRI CHANDRAKANT	3	5	5	5	3	5
18	BHAVSAR NAMAN ATULKUMAR	5	5	5	4	5	5
19	BHIRUD YASH MINESH	5	5	5	4	5	5
20	BHORI RIDDHI ANIL	5	5	4	5	5	5
21	BHUYAL CHETAN NARESH	4	5	5	5	5	5
22	BODKE OMKAR PANDHARINATH	5	4	5	5	5	5
23	CHANDALIYA PRIYANSH PARAMVEER	5	5	5	5	5	5
24	CHATTERJEE ANIK TARUN	5	5	4	5	5	3
25	CHAUDHARI AAYUSHI BHUPENDRA	5	5	5	4	5	4
26	CHAUDHARI ADITYA VIJAY	5	4	5	5	5	5
27	CHAUDHARY UMAIR AHMAD MOHD HUSSAIN	5	5	4	5	5	5
28	CHAUHAN ALOK AWADHESH	3	4	5	5	5	4
29	CHAUHAN HARSHIT SHANKARLAL	5	5	5	5	3	4
30	CHAUHAN MONI RAJKUMAR	5	3	5	5	5	5
31	CHAVAN ARYAN KAMALAKAR	5	5	5	3	4	5
32	CHINCHOLE SHRIKANT JALBA	3	5	5	3	5	5
33	CHORGHE VIDHI AJAY	5	4	5	3	5	5
34	CHOUDHARY SONAL BHANARAM	4	5	5	5	5	5
35	DALVI MANISH SUNIL	5	5	5	5	3	5



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36	DAWANE RUTUJA PREMDAS	5	4	5	5	5	5
37	DESALE SUHANI SUHAS	5	4	5	5	5	5
38	DHUMAL ALISHA AMAR	3	4	5	5	5	4
39	GALANDE TEJAS POPAT	5	5	5	5	3	4
40	GAONKAR PURVA PANDURANG	5	5	5	4	5	5
41	GARJE TUSHAR SUNIL	4	5	5	5	3	5
42	GAWADE GAYATRI RAMKRISHNA	4	5	5	5	5	5
43	GHARAT PIYUSH BHARAT	4	5	3	5	5	5
44	GHUGARE AYUSH MARUTI	5	4	5	5	4	4
45	GHUGE ATIKSH SANDEEP	3	3	5	3	3	5
46	GOHIL JAINEEL MAHESH	5	4	4	5	5	3
47	GULBHILE MADHURI MAHADEV	5	5	5	5	5	5
48	GUPTA AARYA OMPRAKASH	5	4	5	5	5	5
49	GUPTA AMISHA SUNIL	5	4	5	5	3	5
50	GUPTA RAJ RAMPYARE	5	4	4	5	3	5
51	HARDULE PRANAY DILIRAM	4	5	5	3	5	4
52	HARIJAN AKLESH KAMLESH	4	5	4	5	5	5
53	HONSHETTE SAMHAJI SHIVANAND	5	5	5	5	4	4
54	JABAR TANMAY ANKUSH	4	5	5	5	4	3
55	JADHAV ATHARVA PRASHANT	5	5	5	5	5	5
56	JADHAV SANSKAR MAHESH	5	5	5	5	5	5
57	JAGTAP SAMYAK SANDEEP	4	5	5	4	5	5
58	JAI DNYANESHWAR KALE	5	5	5	5	4	5
59	JAIN JAINAM DEEPAK	4	3	4	4	5	5
60	JALGAONKAR AAKANSHA PRADEEP	5	5	5	3	4	5
61	JAMDADE SAIRAJ SURESH	4	3	5	5	5	5
62	JOSHI KRISHNA CHETAN	4	5	4	5	5	5
63	KADAM MANSI SURESH	5	4	5	5	5	5
64	KADAM PRATIKA GANESH	5	5	4	5	4	5
65	KADUKAR SIDDHESH SURAJ	5	5	4	3	5	3
66	KAJOLI SHUBHAM GURUDAS	4	5	5	5	3	5
67	KAKADE HARSH VINAY	5	5	4	5	5	5
68	KAMBLE ANSH SURESH	3	5	5	4	5	5
69	KAMBLE HARSH DEEPAK	5	5	5	4	5	4
70	KAMBLE PRABODH BALAJI	5	5	5	5	5	5
71	KAMBLE RUSHIKESH RAVINDRA	5	5	5	5	5	4
72	KAMBLE SRUSHTI AKASH	5	5	5	4	4	4
73	KAPSE TANMAY SANTOSH	5	5	5	5	5	5
74	KARALKAR DIPESH MAHESH	5	5	5	4	5	5
75	KATE ARYAN NITIN	5	5	4	3	5	5
76	KEVADIYA MEET NARSHIBHAI	5	4	5	5	5	4



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77	KHAN MOHD TAHA MOHD ZUBER	5	4	5	5	5	5
78	KHAN PARVEZ LUKMAN GANI	5	5	4	4	4	5
79	KHANOLKAR ROHIT KOMAL	3	5	5	5	5	3
80	KONDUSKAR SANSKRUTI DASHRATH	5	5	3	5	5	5
81	KORDE SANKET VITHOBA	5	5	5	4	4	4
82	KULKARNI DIVIT ASHISH	5	5	4	5	4	5
83	KUMARE VED RAVINDRA	4	5	5	5	5	5
84	KURMI ARYAN SUBHASH	5	4	5	5	5	5
85	KUSHWAHA PRATIKSHA ANIL	4	5	3	5	5	5
86	KUTE YASH DASHRATH	4	3	5	5	5	3
87	KUVAR ARYAN PRAFULLA	5	5	5	4	4	5
88	LAD MADHURA PRASHIL	5	5	5	4	5	5
89	LOHAR SRUSHTI KIRAN	5	4	5	3	4	5
90	LOKARE SWAYAM MANGESH	5	5	5	5	5	5
91	MAHADIK AAYUSH BHAGWAN	5	5	5	5	5	5
92	MAHADIK MALATI SANTOSH	5	5	5	5	5	4
93	MAHAJAN NIHARIKA MUKUNDA	5	4	3	4	4	5
94	MAHALE UDAY RAMAN	4	5	4	5	5	5
95	MAKWANA YASH PIYUSH	5	5	5	5	5	5
96	MALAVADE TANISH SANDEEP	5	5	5	4	5	5
97	MANE ASAWARI ANIL	3	4	5	5	5	5
98	MANE DEEPAK VISHWAS	5	5	4	5	3	5
99	MANUSHREE MISTY	5	5	5	5	4	5
100	MEHTA MEET HITESH	5	5	3	3	5	5
101	MESTA MANTHAN HARESH	5	3	5	5	4	5
102	MHASKAR VEDANT VISHNU	4	4	3	5	5	5
103	MISHRA SHWETA ARVIND	5	5	5	5	4	5
104	MOHAMMAD SHUJA SYED ZIYARAT HUSAIN	5	5	5	4	5	5
105	MOHITE ANUSHKA VIKAS	5	5	5	5	5	3
106	MORE SANJANA SHIVAJI	5	5	5	3	5	5
107	MORE SHUBHAM DEEPAK	5	5	5	4	4	5
108	NAGRE PRATHMESH UTTAM	5	5	4	5	3	5
109	NAIK BHARGAV SUNIL	5	5	4	4	4	5
110	NAIK MANTHAN ARVIND	5	5	5	5	5	5
111	NAIK MEET NINAD	5	5	3	4	5	3
112	NAIK VEDANT SANDEEP	5	5	5	3	4	4
113	NALANG PARTH RAMCHANDRA	5	5	5	4	5	5
114	NANDI MANNAT AMOL	5	5	5	4	4	5
115	NARE ADITYA MUKESH	5	5	5	5	4	5
116	NIKUMBHE CHINMAY RAJU	5	5	3	5	5	5
117	NIVATE HARSHAL NARAYAN	4	3	5	5	4	5



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118	PALIWAL PARTH JEETENDRA	3	5	5	3	5	5
119	PANCHAL PREM LAXMIKUMAR	4	5	4	5	5	5
120	PANDEY KARAN SANJAY	5	5	5	5	4	4
121	PANERIA VIHAAN MANOJ	5	4	5	5	5	5
122	PANVALKAR VALLARI RAVIKIRAN	5	4	4	5	5	4
123	PARAB SANIYA LAXMAN	5	5	5	5	5	4
124	PASWAN ANKIT SHANKAR	5	4	5	5	5	5
125	PATADIA OM RUPAL	4	3	4	3	4	3
126	PATEL ASHISH RAMESH	5	5	5	5	3	4
127	PATEL HETVI PIYUSH	5	5	3	4	5	4
128	PATEL MOKSH DAXESH	5	5	5	5	4	5
129	PATEL YASHIKA SUNIL	4	5	5	5	5	5
130	PATIL AAKANSHA ANKUSH	5	5	5	5	5	5
131	PATIL DHANASHREE LILADHAR	5	4	5	4	5	5
132	PATIL JAY VIJAY	5	5	5	5	4	5
133	PATIL KARAN PANKAJ	5	4	5	5	3	5
134	PATIL KHUSHAL SANTOSH	4	5	3	5	5	5
135	PETHKAR OM	5	5	4	3	5	4
136	BHASKER SANIL YASH	3	5	5	5	5	4
137	DEDHIA YASH	5	4	5	5	5	5
138	DESAI GAURI SANTOSH	5	5	5	5	5	5
139	KANOJIYA OM SURYABHAN	5	4	5	5	5	5
140	KARPE SAHIL VIKAS	4	5	5	5	4	4
141	LAKHANI PARV SANJAY KUMAR	5	5	3	5	5	5
142	MORE SWANIK NILESH	3	5	5	5	5	5
143	PATIL LUV ASHOK	4	4	5	4	5	3
144	PATIL MANASVI RATNAKAR	5	3	5	4	3	3
145	PATIL PRANJAL MAHENDRA	4	4	5	4	5	5
146	PATIL SANDHVI KANTI	5	5	5	5	4	4
147	PATIL SHWETA ASHOK	4	5	3	3	5	5
148	PATIL SUPRIYA SANTOSH	3	4	4	5	5	3
149	PATIL SWARAJ RAJENDRA	4	5	5	4	4	5
150	PAWAR SHUBHAM SUNIL	4	4	5	5	5	5
151	PAWAR SWARAJ RAJENDRA	5	4	5	4	4	5
152	PENDHARKAR YASH DEEPAK	5	5	5	5	3	5
153	PINJARI REHAN LATIF	5	4	5	4	5	5
154	POOJARY SINCHANA GOPAL	3	5	5	4	5	5
155	PRAJAPATI SUMIT PRATAP	5	5	5	5	5	5
156	RAJAK AADITYA RAVI	5	4	4	5	5	5
157	RANE SAHIL SURESH	5	5	5	5	5	5
158	RATHOD RAHUL BALIRAM	5	5	4	5	5	5
159	RATNE ROHAN GANESH	5	5	4	5	5	3



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160	RAUT ALISHA SHEKHAR	5	5	5	4	5	4
161	RAUT MAYANK ANKUSH	3	4	3	5	5	5
162	RAUT RUDRA RAKESH	5	3	4	5	5	5
163	RAUT SOHAM KIRTIKUMAR	4	5	4	5	5	4
164	RAVALE PRATIK RANGNATH	5	4	5	5	3	4
165	SALGAONKAR DAKSHATA CHANDRAKANT	5	5	5	5	5	5
166	SALUNKHE SANSKAR VIRENDRA	5	5	5	3	4	5
167	SAWANT ESHA MAHESH	4	5	5	3	5	5
168	SAWANT MAITHILI NILESH	5	4	5	3	5	5
169	SAWANT RISHIKESH KISHOR	5	3	5	5	5	5
170	SAWANT SAMAR SANTOSH	5	5	5	5	3	5
171	SAWANT SHREYA AMIT	3	5	4	5	5	5
172	SAWANT SUMRITA SUKHADEO	3	5	5	5	5	5
173	SENTA VISHAL VIJAYBHAI	5	4	5	5	5	4
174	SHAH AAYUSH RAJKUMAR	5	5	5	5	3	4
175	SHAIKH RIYAAN AKEELAHMED	5	4	5	4	5	5
176	SHARMA RAJ BABLU	4	5	5	5	3	5
177	SHAW PRALAYANKAR SHEOPRASAD	5	5	3	5	5	5
178	SHETTIGAR TEJAS SATHISH	3	5	5	5	5	5
179	SHETTY PRANISH HARISH	4	4	5	5	4	4
180	SINGH ANTARIKSH ARJUN	5	3	5	3	3	5
181	SINGH ARYAN SURYAPRAKASH	4	4	5	5	5	3
182	SINGH RISHU MANOJ	5	5	5	5	5	5
183	SINGH SHUBHANSHU ARVIND KUMAR	4	5	3	5	5	5
184	SONDIGALA HARSH RAJUBHAI	3	4	4	5	3	5
185	TALEKAR JAY CHANDRASEN	4	5	5	5	3	5
186	TALIKOTE SANSKARDEEP BALAJI	4	4	5	3	5	4
187	TAYADE SOHAM RAJENDRA	5	4	5	5	5	5
188	THAKUR SANIKA AVINASH	5	5	5	5	4	4
189	THAKUR URVI VIVEK	5	4	5	5	4	3
190	THOSAR SHLOK ABHIJIT	3	5	5	5	5	5
191	TIWARI CHANDAN VIJAY	5	5	5	5	5	5
192	TIWARI MAHEK TRIPURARI	5	4	4	4	5	5
193	VAIDYA PARTH NILESH	5	5	5	5	4	5
194	VAITY RUGVED NILESH	5	5	4	4	5	5
195	VANARASE PARAS KAMLESH	5	5	4	3	4	5
196	VARAK PRAFUL BABYA	5	5	5	5	5	5
197	VARIA NAMAN VIMAL	3	4	3	5	5	5
198	VAZE NEHALI NITIN	5	3	4	5	5	5
199	VICHARE KAVYA MAHESH	4	5	4	5	4	5
200	VISHWAKARMA SUMIT	5	4	5	3	5	3



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	KANHAIYALAL						
201	WAKPAIJAN SANIA PRASHANT	5	5	5	5	3	5
202	YADAV DEEPAKKUMAR AWADHRAJ	5	5	5	5	5	5
203	YADAV KRISHNA ANIL	4	5	5	4	5	5
204	YADAV PRITI RAJU	5	4	5	4	5	4

Summary

Total No. of Students	204					
Total Present	204	204	204	204	204	204
Qualifier Level (%)	64	64	64	64	64	64
Maximum Level	5	5	5	5	5	5
Qualifier Level in terms of marks	3.2	3.2	3.2	3.2	3.2	3.2
No. of Students above Qualifier Level	182	191	186	180	180	185
% No. of Students above Qualifier Level	89.22	93.63	91.18	88.24	88.24	90.69



Result Analysis

Number of Students Appeared	204
Number of Students Passed	180
Number of Students Failed	24
Percentage of Result	88.2%
Number of Students with marks $\geq 80\%$	7
Number of Students with marks $60 \leq \% < 80$	47
Number of Students with marks $40 \leq \% < 60$	126

CO attainment through In-semester and End semester evaluation

Attainment through Internal Assessment (X1):

CO		BSC102.1	BSC102.2	BSC102.3	BSC102.4	BSC102.5	BSC102.6
Internal Assessment	IA1	1	2	1			
	IA2				1	1	1
Quizzes	Q1	3					
	Q2		3				
	Q3			3			
	Q4				3		
	Q5					3	
	Q6						3
Assignments	A1	3					
	A3			3			
	A4				3		
	A5					3	
	A6						3
Course Exit Survey		3	3	3	3	3	3



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Average (X1)	2.50	2.67	2.5	2.5	2.5	2.33
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Attainment through External assessment (X2):

University Exam (Theory) (45 marks)				
Qualifier Level (%)	Qualifier Level in terms of marks	No. of Students above Qualifier Level	% No. of Students above Qualifier Level	Attainment level
54	24.3	77	37.75	1.00

CO Attainment:

Weightage for End-semester Attainment (W2) = 60% Weightage for In-semester Attainment (W1) = 40%			
CO	Average of Internal Attainment (X1)	Weighted average of External Attainment (X2)	$Y = 0.4 X1 + 0.6 X2$
BSC102.1	2.50	1.00	1.60
BSC102.2	2.67	1.00	1.67
BSC102.3	2.50	1.00	1.60
BSC102.4	2.50	1.00	1.60
BSC102.5	2.50	1.00	1.60
BSC102.6	2.33	1.00	1.53
Overall CO attainment of Course			1.60



Attainment of Course Outcomes

CO	Target Set	Actual Attainment	CO Attainment Achieved (Y or N)
BSC102.1	1.80	1.60	N
BSC102.2	1.80	1.67	N
BSC102.3	1.80	1.60	N
BSC102.4	1.80	1.60	N
BSC102.5	1.80	1.60	N
BSC102.6	1.80	1.53	N
Overall CO Attainment of the Course			1.6

Attainment of POs and PSOs:

BSC102	Program Outcome													
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
PO/PSO Attainment	3.00	2.00	2.00					2.00	2.00	2.00		2.00		
Rounded PO/PSO Attainment	3	2	2					2	2	2		2		
Actual PO/PSO Attainment	1.6	1.02	0.90					0.9	0.9	0.9		1.11		

Sign. of Faculty



Observations and Action Taken

BSC102.1	Target Level	1.80
	Attainment Level	1.60
	Observations	Students struggle with foundational concepts like atomic excitation/de-excitation and energy level diagrams.
	Action	Reinforce basics through conceptual teaching and regular practice of energy level diagrams.
BSC102.2	Target Level	1.80
	Attainment Level	1.67
	Observations	Poor grasp of reflection, refraction, and Snell's law hampers understanding.
	Action	Emphasize basics with ray diagrams and trigonometric applications through frequent problem-solving.
BSC102.3	Target Level	1.80
	Attainment Level	1.60
	Observations	Weak understanding of light behaviour affects ray diagram construction and numerical solving skill.
	Action	Revisit fundamental optics laws and solved various numerical problems during lectures.
BSC102.4	Target Level	1.80
	Attainment Level	1.60
	Observations	Inadequate understanding of electricity, magnetism, and vector calculus causes difficulty.
	Action	Focus on core concepts and integrated vector calculus through guided numerical practice and assignments.
BSC102.5	Target Level	1.80
	Attainment Level	1.60
	Observations	Students struggle with complex functions, differential equations, and modern physics concepts.
	Action	Strengthen math foundation and modern physics basics through step-by-step problem-solving in class and assignments.
BSC102.6	Target Level	1.80
	Attainment Level	1.53
	Observations	Confusion in semiconductor concepts and unit conversions leads to fundamental errors.
	Action	Clarify key terms and improved mathematical application through repetitive numerical exercises and quizzes.

Signature of Faculty

Signature of HOD



Vidyavardhini's College of Engineering & Technology

First Year Engineering
