BCA - Course Outcomes

Odd Semester 2021-22

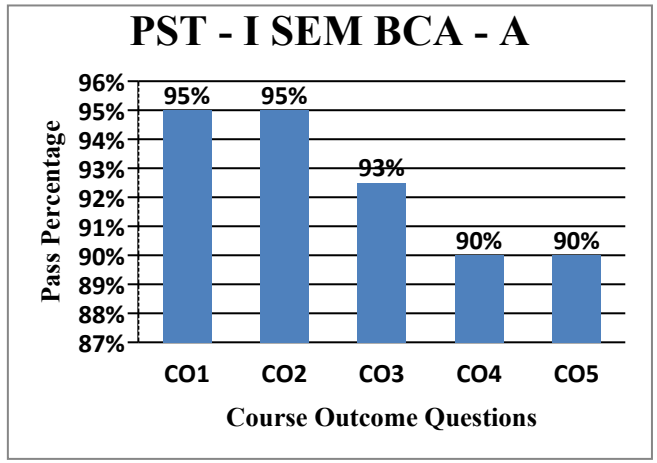
<table>
<tr><th>Semester</th><th>Paper Code</th><th>Title of the Paper</th><th>Course Outcome</th><th>CO Attainment</th></tr>
<tr>
<td>1</td>
<td>CA-C2T</td>
<td>Problem Solving Techniques</td>
<td>1) Follow the software development process (requirements analysis, design, implementation, and testing) in the development of multi-source code files
2) Employ good software engineering practices such as incremental development, data integrity checking, and adherence to style guidelines
3) Construct programs that demonstrate effective use of advanced c features including the pre-processor, pointers, void *, static and external variables, advanced data structures, and</td>
<td>
Subject Name: PST

Subject Code : CA-C2T

Semester: I SEM
BCA 'A ' SECTION
Batch: 2021 - 2025

<table>
<tr><th>Questions</th><th>CO1</th><th>CO2</th><th>CO3</th><th>CO4</th><th>CO5</th></tr>
<tr><td>No of Students Appeared</td><td>40</td><td>40</td><td>40</td><td>40</td><td>40</td></tr>
<tr><td>No of Students Passed</td><td>38</td><td>38</td><td>37</td><td>36</td><td>36</td></tr>
<tr><td>No of Students Failed</td><td>2</td><td>2</td><td>3</td><td>4</td><td>4</td></tr>
<tr><td>Pass %</td><td>95%</td><td>95%</td><td>93%</td><td>90%</td><td>90%</td></tr>
</table>

Over all Result Analysis
<table>
<tr><td>Total No of Students</td><td>49</td></tr>
<tr><td>No of Students Appeared</td><td>40</td></tr>
<tr><td>No of Students Absent</td><td>9</td></tr>
<tr><td>No of Students Passed</td><td>36</td></tr>
<tr><td>No of Students Failed</td><td>4</td></tr>
<tr><td>Pass %</td><td>90.00%</td></tr>
</table>



</td>
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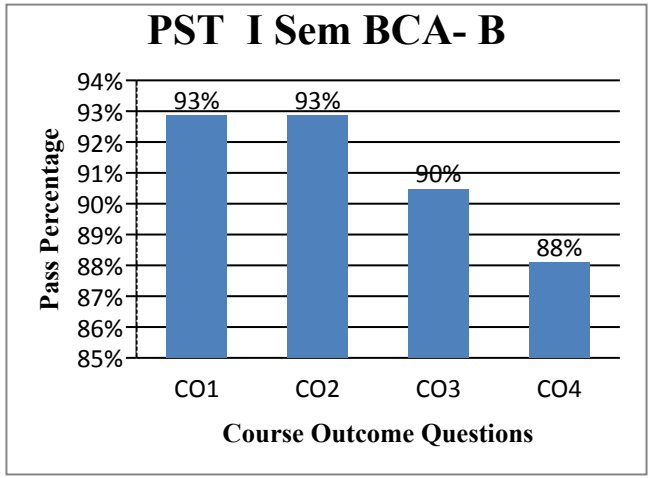
</table>

			dynamic memory management 4) Analyze and construct effective algorithms 5) Work well with peer developers in a team situation including mentoring and peer reviews	**Subject Name: Problem Solving Techniques** **Sem: I SEM BCA - B** **Subject Code : CA-C2T** **Batch: 2021 - 2024** **Questions** / **CO1** / **CO2** / **CO3** / **CO4** No of Students Appeared: 42 / 42 / 42 / 42 No of Students Passed: 39 / 39 / 38 / 37 No of Students Failed: 3 / 3 / 4 / 5 Pass %: 93% / 93% / 90% / 88% **Over all Result Analysis** Total No of Students: 49 No of Students Appeared: 42 No of Students Absent: 7 No of Students Passed: 37 No of Students Failed: 5 Pass %: 88% 
1	CA-	Data Structures	1) Student will be	

	C3T			able to choose appropriate data structure as applied to specified problem definition. 2) Student will be able to handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures. 3) Students will be able to apply concepts learned in various domains like DBMS, compiler construction etc. 4) Students will be able to use linear and non-linear data structures like stacks, queues , linked list etc. 5) Ability to analyze algorithms and algorithm

Subject Name: Data Structures

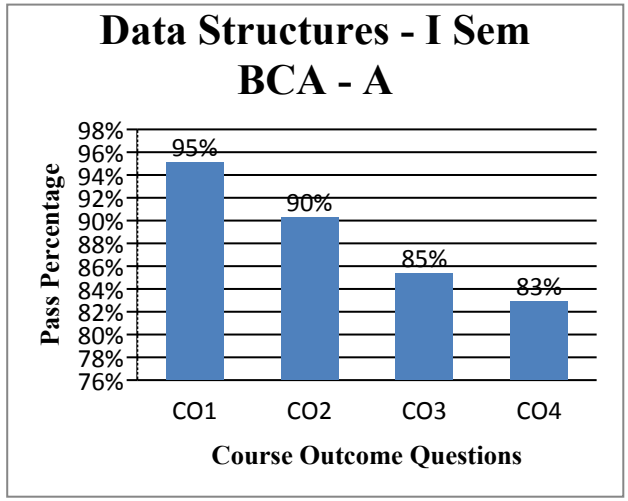
Subject Code : CA-C3 T

Semester: I SEM BCA - A
Batch: 2021 - 2024

Questions	CO 1	CO2	CO3	CO4
No of Students Appeared	41	41	41	41
No of Students Passed	39	37	35	34
No of Students Failed	2	4	6	7
Pass %	95%	90%	85%	83%

Over all Result Analysis

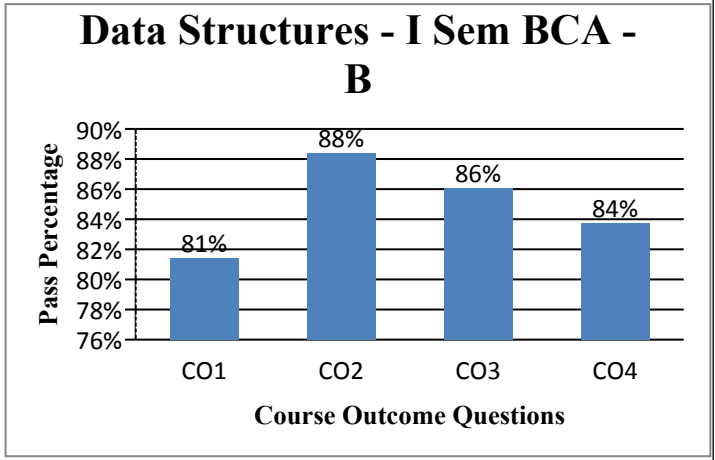
Total No of Students	49
No of Students Appeared	41
No of Students Absent	8
No of Students Passed	34
No of Students Failed	7
Pass %	83%



Subject Name: Data Structures

Subject Code : CA-

Semester: I SEM BCA(B)

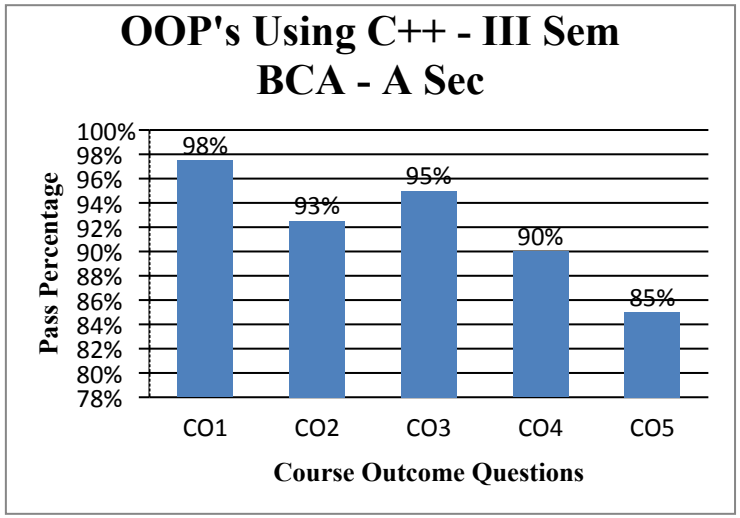
			correctness and ability to summarize searching and sorting techniques 6) Ability to describe stack, queue and linked list operation and solve problems based upon different data structure & also write programs.	C3T **Batch: 2021 - 2024** **Questions** **CO1** **CO2** **CO3** **CO4** No of Students Appeared 43 43 43 43 No of Students Passed 35 38 37 36 No of Students Failed 8 5 6 7 Pass % 81% 88% 86% 84% **Over all Result Analysis** Total No of Students 49 No of Students Appeared 43 No of Students Absent 6 No of Students Passed 35 No of Students Failed 8 Pass % 81% 
3	BCA303	Object Oriented Programming using C++	1) Perform object oriented	

			programming to develop solutions to problems 2) Demonstrating usage of control structures, modularity, I/O. and other standard language constructs. 3) Demonstrate adeptness of object oriented programming in developing solutions to problems demonstrating usage of data abstraction, encapsulation, and inheritance. 4) Learn syntax, features of, and how to utilize the Standard Template Library. 5) Learn other features of the C++ language including templates, exceptions, forms of casting, conversions, covering all features of the language.	**Subject Name:** OOP's Using C++ **Subject Code :** BCA 303 T **Semester: III SEM BCA 'A' Section** **Batch: 2020 - 2023**

Questions	**CO1**	**CO 2**	**CO 3**	**CO4**	**CO5**
No of Students Appeared	40	40	40	40	40
No of Students Passed	39	37	38	36	34
No of Students Failed	1	3	2	4	6
Pass %	98%	93%	95%	90%	85%

Over all Result Analysis

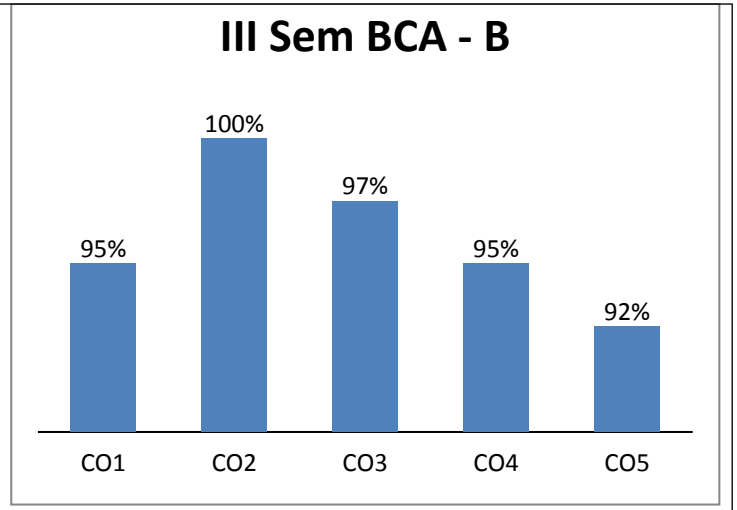
Total No of Students	44
No of Students Appeared	40
No of Students Absent	4
No of Students Passed	34
No of Students Failed	6
Pass %	85%



Subject Name: OOP's Using C++ **Sem: III SEM BCA 'B' Section**

Subject Code : BCA 303 T **Batch: 2020 - 2023**

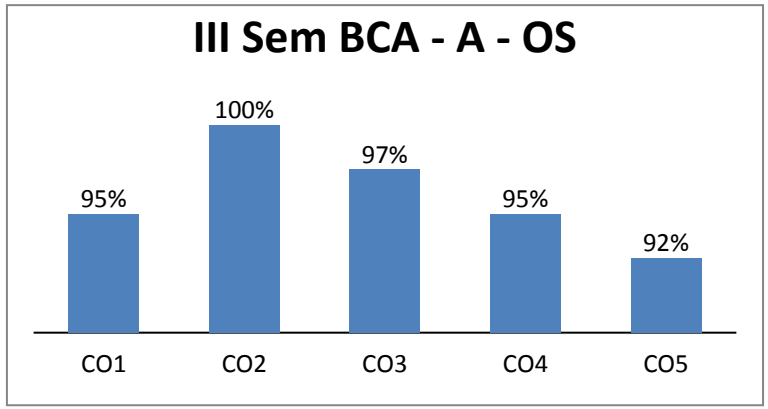
Questions	**CO1**	**CO 2**	**CO 3**	**CO4**	**CO5**
No of Students Appeared	39	39	39	39	39
No of Students Passed	37	39	38	37	36
No of Students Failed	2	0	1	2	3
Pass %	95%	100 %	97%	95%	92%

				Over all Result Analysis Total No of Students 41 No of Students Appeared 39 No of Students Absent 2 No of Students Passed 34 No of Students Failed 5 Pass % 87%	
3	BCA305	Operating System	1) Master functions, structures and history of operating systems 2) Master understanding of design issues associated with operating systems 3) Master various process management concepts including	**Subject Name:** Operating System **Subject Code :** BCA 305 T **Questions** **CO1** **CO2** **CO3** **CO4** **CO5** No of Students Appeared 39 39 39 39 39	**Semester: III SEM BCA 'A' Section** **Batch: 2020 - 2023**

			scheduling, synchronization, deadlocks 4) Master concepts of memory management including virtual memory 5) Master issues related to file system interface and implementation, disk management 6) Be familiar with protection and security mechanisms 7) Be familiar with Deadlock concepts	No of Students Passed	37	39	38	37	36
				No of Students Failed	2	0	1	2	3
				Pass %	95 %	100%	97 %	95%	92%

Over all Result Analysis

Total No of Students	44
No of Students Appeared	39
No of Students Absent	5
No of Students Passed	34
No of Students Failed	5
Pass %	87 %



Subject Name: Operating System

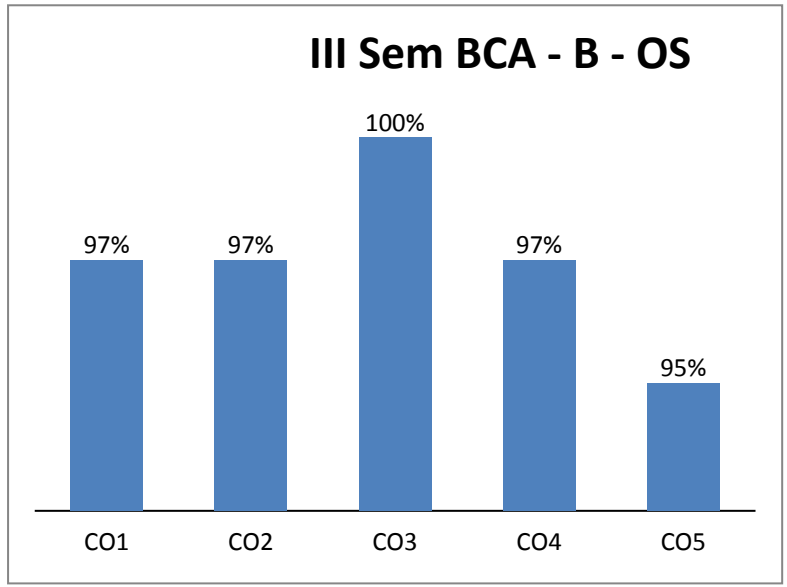
Subject Code : BCA 305 T

Semester: III SEM BCA 'B' Section

Batch: 2020 - 2023

Questions	**CO 1**	**CO2**	**CO3**	**CO4**	**CO5**

				No of Students Appeared	38	38	38	38	38
				No of Students Passed	37	37	38	37	36
				No of Students Failed	1	1	0	1	2
				Pass %	97 %	97%	100%	97%	95%



Over all Result Analysis

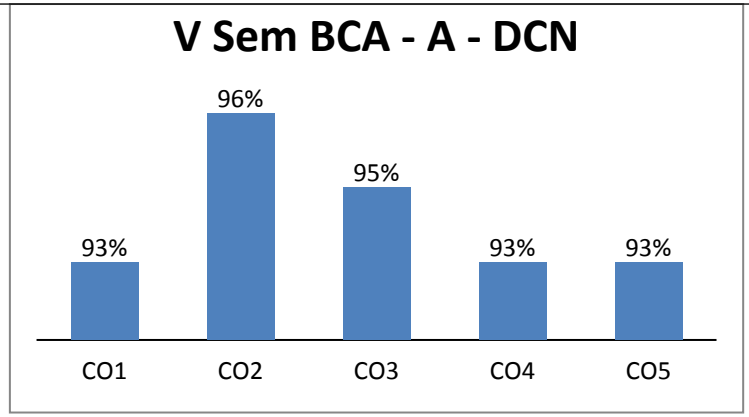
Total No of Students	41
No of Students Appeared	38
No of Students Absent	3
No of Students Passed	34
No of Students Failed	4
Pass %	89 %

5	BCA501	Data Communication and Networks	1) To understand the use of client/server architecture, inter process communication and to explain the basic communication protocols. 2) To understand elementary socket system calls, advanced socket system calls and Java Socket API and to explain the basic concepts relating to TCP and UDP based sockets. 3) To understand File transfer protocol, remote login using pseudo terminal. 4) Learn network models and their functions. 5) To gain knowledge of transmission media and generations of communication	**Subject Name:** Data Communication and Network **Semester: V SEM BCA(A)** **Subject Code :** BCA 501 **Batch: 2019 - 2022** **Questions** / **CO1** / **CO2** / **CO3** / **CO4** / **CO5** No of Students Appeared: 56 / 56 / 56 / 56 / 56 No of Students Passed: 54 / 52 / 52 / 52 / 52 No of Students Failed: 2 / 4 / 4 / 4 / 4 Pass %: 96% / 93% / 93% / 93% / 93%

technology.

Over all Result Analysis

Total No of Students	58
No of Students Appeared	56
No of Students Absent	2
No of Students Passed	51
No of Students Failed	5
Pass %	91%



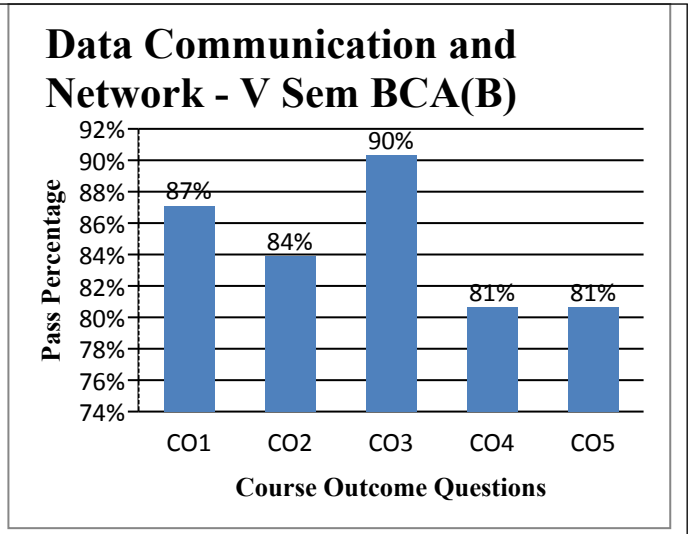
Subject Name: Data Communication and Network

Semester: V SEM BCA(B)

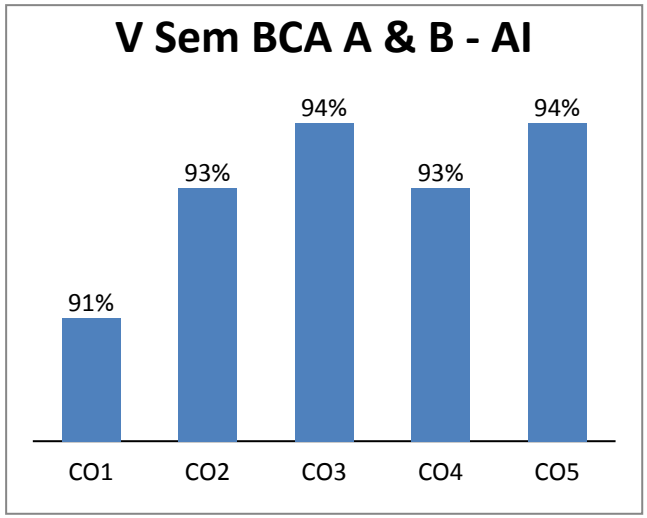
Subject Code : BCA 501

Batch: 2019 - 2022

Questions	**CO 1**	**CO2**	**CO 3**	**CO4**	**CO5**
No of Students Appeared	31	31	31	31	31
No of Students Passed	27	26	28	25	25
No of Students Failed	4	5	3	6	6
Pass %	87%	84%	90%	81%	81%

				Over all Result Analysis Total No of Students 38 No of Students Appeared 31 No of Students Absent 7 No of Students Passed 25 No of Students Failed 6 Pass % 81% 
5	BCA 502	Artificial Intelligence	1)Understand the informed and uninformed problem types and apply search strategies to solve them. 2) Apply difficult real life problems in a state space representation so as to solve those using AI techniques like searching and game playing.	**Subject Name:** Artificial Intelligence **Subject Code :** BCA 502 **Semester: V SEM BCA(A & B)** **Batch: 2019 - 2022**

Questions	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
No of Students Appeared	90	90	90	90	90

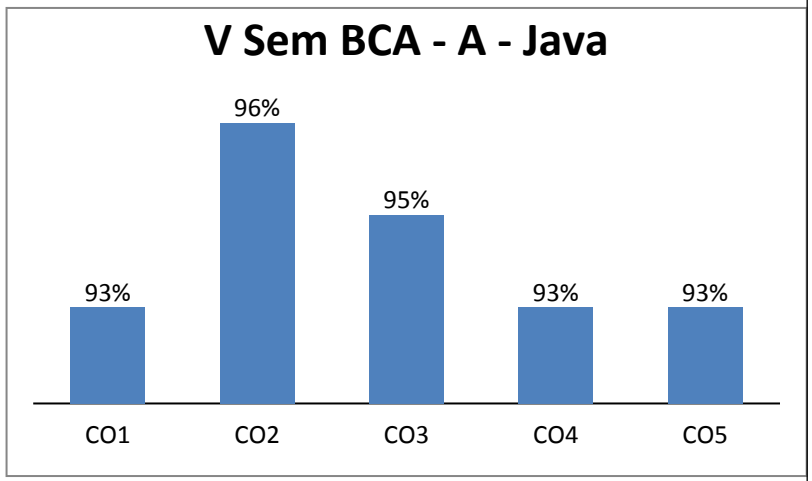
			3) Design and evaluate intelligent expert models for perception and prediction from intelligent environment. 4) Formulate valid solutions for problems involving uncertain inputs or outcomes by using decision making techniques. 5) Demonstrate and enrich knowledge to select and apply AI tools to synthesize information and develop models within constraints of application area.	No of Students Passed 82 84 85 84 85 No of Students Failed 8 6 5 6 5 Pass % 91 % 93% 94% 93% 94% **Over all Result Analysis** Total No of Students 95 No of Students Appeared 90 No of Students Absent 5 No of Students Passed 81 No of Students Failed 9 Pass % 90 % 
5	BCA503	Java Programming	1)knowledge of the structure and model of the Java programming language,	**Subject Name: Java Programming** **Semester: V SEM BCA - A** **Subject Code : BCA 503T** **Batch: 2019 - 2022**

			(knowledge) 2) use the Java programming language for various programming technologies (understanding) 3) develop software in the Java programming language, (application) 4) evaluate user requirements for software functionality required to decide whether the Java programming language can meet user requirements (analysis) 5) propose the use of certain technologies by implementing them in the Java programming language to solve the given problem (synthesis) 6) Choose an engineering approach to solving problems, starting from the acquired knowledge of programming and	

Questions	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
No of Students Appeared	56	56	56	56	56
No of Students Passed	52	54	53	52	52
No of Students Failed	4	2	3	4	4
Pass %	93 %	96%	95 %	93%	93%

Over all Result Analysis

Total No of Students	58
No of Students Appeared	56
No of Students Absent	2
No of Students Passed	51
No of Students Failed	5
Pass %	91 %



knowledge of operating systems. (evaluation)

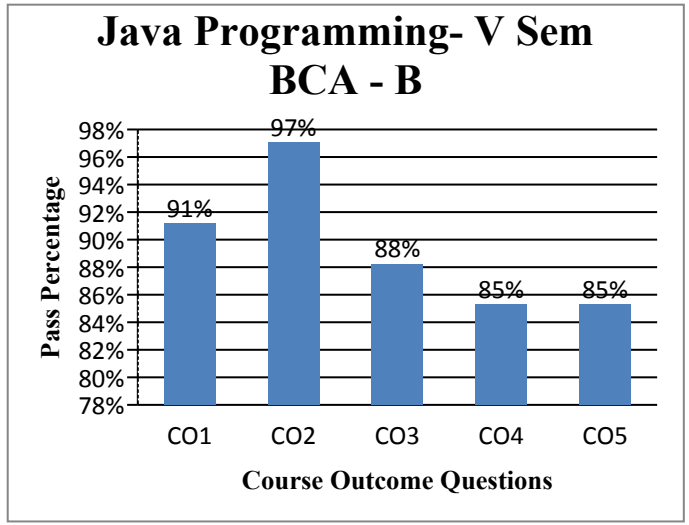
Subject Name: Java Programming **Semester: V SEM BCA - B**

Subject Code : BCA 503T **Batch: 2019 - 2022**

Questions	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
No of Students Appeared	34	34	34	34	34
No of Students Passed	31	33	30	29	29
No of Students Failed	3	1	4	5	5
Pass %	91%	97%	88%	85%	85%

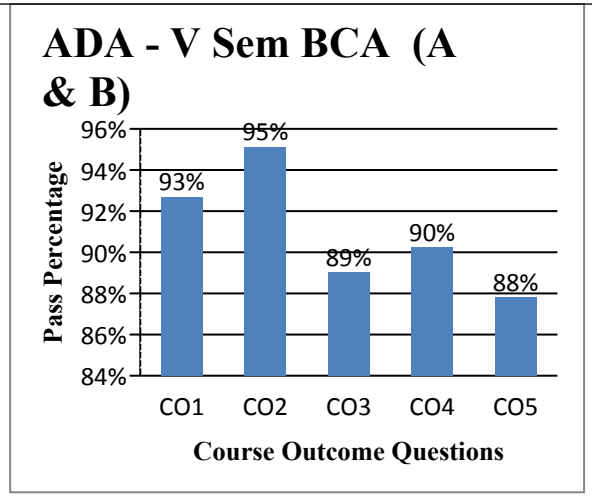
Over all Result Analysis

Total No of Students	38
No of Students Appeared	34
No of Students Absent	4
No of Students Passed	29
No of Students Failed	5
Pass %	85%

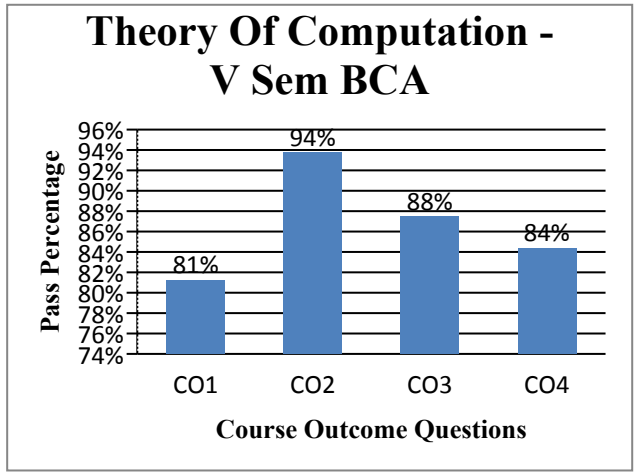


5	BCA504	Analysis and Design of Algorithm	1)Understand the notion of an algorithm, asymptotic notations, Mathematical analysis of recursive –non recursive algorithms and Brute-force Techniques. 2) Understand the algorithm design techniques divide and conquer, dynamic programming, greedy method, decrease and conquer, Backtracking, Branch and Bound strategy. 3) Analyze the complexity of algorithm design techniques divide and conquer, dynamic programming, greedy	**Subject Name:** Analysis and Design of Algorithm **Semester: V SEM BCA** **Subject Code :** BCA 504 **Batch: 2019 - 2022**

Questions	**CO 1**	**CO2**	**CO 3**	**CO4**	**CO5**
No of Students Appeared	82	82	82	82	82
No of Students Passed	76	78	73	74	72
No of Students Failed	6	4	9	8	10
Pass %	93 %	95%	89 %	90%	88%

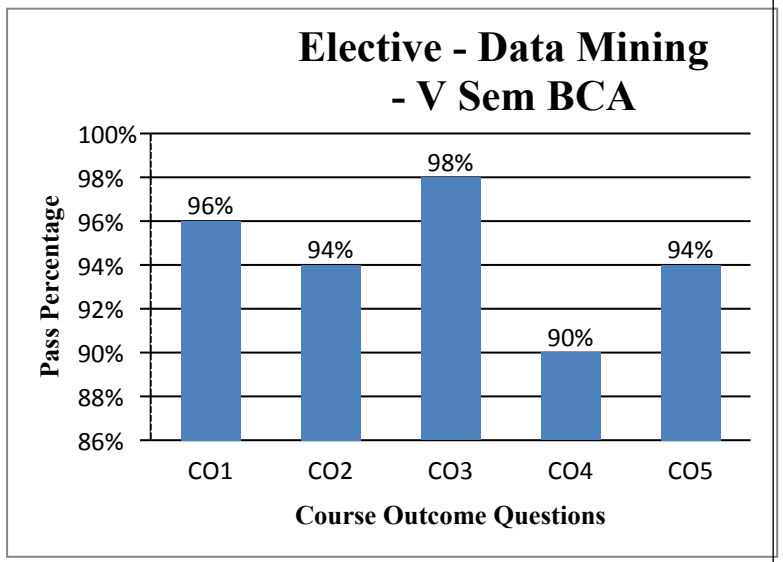
			method, decrease and conquer, Backtracking, Branch and Bound strategy. 4) Solve problems on divide and conquer, dynamic programming, greedy method. 5) Solve problems on decrease and conquer Backtracking, Branch and Bound strategy.	**Over all Result Analysis** Total No of Students 95 No of Students Appeared 82 No of Students Absent 13 No of Students Passed 72 No of Students Failed 10 88 Pass % %	
5	BCA 505	Theory of Computation - ELECTIVE	1)To Interpret the mathematical foundations of computation including automata theory; the theory of formal languages and grammars; the notions of algorithm, decidability, complexity, and computability	**Subject Name: Theory Of Computation (Elective)** **Subject Code : BCA 505T** **Semester: V SEM BCA** **Batch: 2019 - 2022**	

Questions	**CO1**	**CO2**	**CO 3**	**CO4**
No of Students Appeared	32	32	32	32
No of Students Passed	26	30	28	27

			2) To Construct the abstract machines including finite automata, pushdown automata, and Turing machines from their associated languages and grammar 3) Make use of pumping lemma to show that a language is not regular / not context-free 4) Construct the grammar for any given finite automata, pushdown automata or Turing machines Outline the characteristics of P, NP and NP Complete problems 5) Solve computational problems regarding their computability and complexity and prove the basic results of the theory of computation	No of Students Failed 6 2 4 5 Pass % 81% 94% 88% 84% **Over all Result Analysis** Total No of Students 38 No of Students Appeared 32 No of Students Absent 6 No of Students Passed 26 No of Students Failed 6 Pass % 81% 
5	BCA 505	Data Mining - ELECTIVE	1)Understand what Is Data Mining, what kinds of data can be mined, what kinds of patterns can be mined, and what kinds of applications are targeted. 2)Explain major Issues in data mining.	**Subject Name: Data Mining** **Subject Code :** BCA 505T **Semester: V SEM BCA** **Batch: 2019 - 2022**

Questions	CO 1	CO2	CO3	CO4	CO5

			3)Apply machine learning, pattern recognition, statistics, visualization, algorithm, database technology and high-performance computing in data mining applications. 4)Identify what kinds of technologies are used for different application. 5)Manipulate data pre-processing, data Warehouse and OLAP technology, data cube technology; mining frequent patterns and association, classification, clustering, and outlier detection.	No of Students Appeared	50	50	50	50	50
				No of Students Passed	48	47	49	45	47
				No of Students Failed	2	3	1	5	3
				Pass %	96 %	94%	98%	90%	94%

Over all Result Analysis

Total No of Students	54
No of Students Appeared	50
No of Students Absent	4
No of Students Passed	45
No of Students Failed	5
Pass %	90 %