AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE BELA ROPAR PUNJAB

DESCRIPTION OF PROGRAMME OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA (BACHELORS IN COMPUTER APPLICATIONS)

P.O. No.	Description of Programme Outcome	Domain as per Bloom's Taxonomy	Level of Bloom Taxonomy*
PO-1	Use the knowledge and concepts of computer science in day today life.	COGNITIVE	**1, 2, 3**
PO-2	Adhere design and develop system, component or process as well as test and maintain it so as to provide promising solutions to industry and society.	COGNITIVE	**1, 2, 3, 4, 5, 6**
PO-3	Calibrate to identify, critically analyze and formulate complex computing problems using fundamentals of computer science and application domains.	PSYCHOMOTOR	**1, 2, 3, 4, 5, 6**
PO-4	Apply appropriate technologies and tools with an understanding of limitations.	COGNITIVE	**1, 2, 3**
PO-5	Demonstrate knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional practice.	PSYCHOMOTOR	**1, 2, 3, 4, 5, 6**
PO-6	Interpret the impact of the computational solutions in societal and environmental contexts, and demonstrate the knowledge and need for sustainable development.	COGNITIVE	**1, 2, 3, 4, 5, 6**
PO-7	Accumulate professional and ethical responsibility.	AFFECTIVE	**1, 2, 3**
PO-8	Adapt effectively as an individual, and as a member or leader in diverse/multidisciplinary teams.	COGNITIVE	**1, 2, 3, 4, 5, 6**

PO-9	Pick up good communication and presentation skills.	PSYCHOMOTOR	**1, 2, 3, 4, 5, 6**
PO-10	Identify the need for and develop the ability to engage in continuous learning as a Computing professional.	AFFECTIVE	**1, 2, 3**
PO-11/ PSO1	Citethe knowledge and concepts of computer application to ease the daily routine tasks.	COGNITIVE	**1, 2, 3**
PO-12/PSO2	Generate knowledge, how to identify, formulate and design solutions in the areas of Computer Science and Engineering	PSYCHOMOTOR	**1, 2, 3, 4, 5, 6**
PO-13/ PSO3	Assess theoretical foundations of different branches of Computer Science so that students can pursue for higher studies	COGNITIVE	**1, 2, 3, 4, 5, 6**
PO-14/ PSO4	Appraise, explore and build up computer programs in the allied areas like Algorithms, System Software, Multimedia, Web Design and Web applications for computer-based systems of varying complexity.	COGNITIVE	**1, 2, 3, 4, 5, 6**
PO-15/ PSO5	Commend Employability by developing leadership, effective communication & time management skills and also by incorporating ethics & team work ability	AFFECTIVE	**1, 2, 3**

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF HUMANITIES

NAME OF THE PROGRAM : BCA 1st (1st SEM)

NAME OF THE COURSE : GENERAL ENGLISH I (BCA-111)

NAME OF FACULTY : MANDEEP KAUR (ASST. PROF.)

CO No.	Description of Course Outcomes	Method/s of Assessment
CO 1	Apply fundamentals of critical thinking to reading writing and communicating.	MST, Class tests, Class Assignment.
CO 2	Explain new words (vocabulary) that will make students enable to use them while speaking and writing.	MST, Seminar, Class Assignment, Class tests, Rapid fire questions.
CO 3	Practice English grammar to aware the students about the correct usage of it.	MST, Quiz, Seminar, Class assignments, class tests,
CO 4	Designing letters for informal communication.	MST, Seminar, GD, Role play examples.
CO 5	Develop critical creative thinking skills that will make students enable to write essays and differentiate between objective and subjective writing.	MST, Participation in class, Class assignments, Class tests.
CO 6	Demonstrate knowledge of language skills while attempting translation	MST, Participation in class, Class assignments, Class tests.

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF HUMANITIES

NAME OF THE PROGRAM : BCA 1st (1st SEM)

NAME OF THE COURSE : PUNJABI (C) (BCA-112)

NAME OF FACULTY : JASPREET RAI (ASST. PROF.)

C.O. No.	Description Of Course Outcomes	Method/s Of Assessments
CO-1	nwvl dw AiDAYn krn dy nwl izMdgI dIAWloVW qy mjbUrIAW nUM smJx dy smr`Q ho jWdw hY[	jmwqI tYst,AwpsI ivcwr vtWdrw
CO-2	lyK ilKx kwrn Awpxy ivcwr r`Kx kwrn Awpxw p`K spSt krn dy smr`Q ho jWdw hY[	AsweInmYNt
CO-3	BwSw dI DunI ivauNq nUM smJx dy smr`Q ho jWdw hY[	jmwqI tYst,AwpsI ivcwr vtWdrw
CO-4	BwSw dy Sbd dI ivauNqbMdI is`Kx kwrn BwSw mwihr bxdw hY[	qKqw tYst

CO-5	Coty au`qrW vwly pRSnW nwl v`fI g`l nUM QoHVy SbdW iv`c kihx dy smr`Q ho jWdw hY[	AwpsI ivcwr vtWdrw
CO-6	sihj rUp iv`c Biv`K leI iqAwr huMdw hY[	AsweInmYNt

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAM : BCA-I (1st SEM)

NAME OF THE COURSE : FIT (BCA-113)

NAME OF FACULTY : MANDEEP SINGH (ASST. PROF.)

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Draw computer block diagram, Describe characteristics, generations and types of computer and computer components	Quizzes/Objective Test/Assignments/Exams
CO-2	Demonstrate Input and Outputs devices	Assignments/Rapid Fire Questions
CO-3	Defining Memory Hierarchy and various types of software's.	Class Tests/Exams/Home Assignments
CO-4	Illustrate the basics of computer languages.	Class Tests/Exams/Home Assignments
CO-5	Identify various types of number system in computer system and practices converting from one number system to another.	Group Discussing/ Problem solving/Quizzes

CO-6	demonstrate the definition and characteristics of data communication and computer networks	Viva/Oral Exam/Class Tests

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE BELA ROPAR PUNAJB

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAM : BCA-I (1st SEM)

NAME OF THE COURSE : PROGRAMMING USING C (BCA-114)

NAME OF FACULTY : MAMTA RAJPUT (ASST. PROF.)

C.O. No.	Description of Course Outcomes	Methods of Assessment
CO-1	Recognize the flowchart and design analgorithm for a given problem and to develop IC programs using operators.	Discussion Method
CO-2	Describe conditional and iterativestatements to write C programs	Class Test, PPT,Lab
CO-3	Demonstrate user defined functions to solve real time problems	Assignment, Lab, MST
CO-4	Differentiate programs involving decision control statements, loop control statements and case control structures	Assignment, Discussion Method,

CO-5	Write program to enter data to the file, declaring and usage of pointer operations are being covered.	Lab Work, Class test
CO-6	Compare the difference between the Designing, Writing, Compilation and Debugging programs in C Language.	MST, Lab Work

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF HUMANITIES

NAME OF THE PROGRAM : BCA 1ST (2ndSEM)

NAME OF THE COURSE : GENERAL ENGLISH II (BCA-121)

NAME OF FACULTY : GAGANDEEP KAUR (ASST. PROF.)

CO No.	Description of Course Outcomes	Method/s of Assessment
CO 1	Apply fundamentals of critical thinking to reading writing and communicating.	MST, Class tests, Class Assignment.
CO 2	Explain new words (vocabulary) that will make students enable to use them while speaking and writing.	MST, Class Assignment, Class tests.
CO 3	Practise English grammar to aware the students about the correct usage of it.	MST, Class assignments, class tests,
CO 4	Designing letters for formal communication.	MST, Class test.
CO 5	Develop critical creative thinking skills that will make students enable to write essays and differentiate between objective and subjective writing.	MST, Participation in class, Class assignments, Class tests.
CO 6	Demonstrate knowledge of language skills while attempting translation	MST, Participation in class, Class assignments, Class tests.

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF HUMANITIES

NAME OF THE PROGRAM : BCA-I (2nd SEM)

NAME OF THE COURSE : PUNJABI - C (BCA-122)

NAME OF FACULTY : JASPREET RAI (ASST. PROF.)

C.O. No.	Description Of Course Outcomes	Method/s Of Assessments
CO-1	lyKW dw AiDAYn krn dy nwl izMdgI dIAW loVW qy mjbUrIAW nUM smJx dy smr`Q ho jWdw hY[	jmwqI tYst,AwpsI ivcwr vtWdrw
CO-2	ic`TI p`qr rwhIN Awpxy ivcwr r`Kx kwrn Awpxw p`K spSt krn dy smr`Q ho jWdw hY[	AsweInmYNt
CO-3	BwSw dI Swbidk ivauNq nUM smJx dy smr`Q ho jWdw hY[	jmwqI tYst,AwpsI ivcwr vtWdrw
CO-4	BwSw dy au`p BwSw dI ivauNqbMdI is`Kx kwrn BwSw mwihr bxdw hY[	qKqw tYst

CO-5	Coty au`qrW vwly pRSnW nwl v`fI g`l nUM QoHVy SbdW iv`c kihx dy smr`Q ho jWdw hY[	AwpsI ivcwr vtWdrw
CO-6	sihj rUp iv`c Biv`K dIAW sMBwvnwvW leI iqAwr huMdw hY[	AsweInmYNt

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA-1 (2nd SEM)

NAME OF COURSE : DIGITAL ELECTRONICS (BCA-123)

NAME OF FACULTY : TARANJEET KAUR

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Define the fundamental concepts and techniques used in digital electronics	MST, CLASS TEST, VIVA
CO-2	Identify and demonstrate the function of logic gates.	MST, ASSIGNMENT, CLASS TEST
CO-3	Discuss the Boolean algebra laws and theorems	MST, VIVA, CLASS TEST
CO-4	Examine the structure of various number systems and its application in digital design.	MST, PPT CLASS TEST
CO-5	Demonstrate and examine the structure of combinational and sequential circuits.	MST, QUIZ, PPT, VIVA
CO-6	Demonstrate the working of flip flops, and convertors	MST, ASSIGNMENT, CLASS TEST

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAM : BCA-I (2nd SEM)

NAME OF THE COURSE : DATA STRUCTURE (BCA-124)

NAME OF FACULTY : RAKESH JOSHI (ASST. PROF.)

CO No.	Description of Course Outcomes	Method/s of Assessment
CO 1	Describe data structure, its types and operations.	Univ. Exam, MST, Test , Assignment
CO 2	Illustrate different data structures i.e.. arrays, stack, queue, link list.	Exam MST, MCQs, Practical
CO 3	Write algorithms for performing different operations on data structure.	Exam MST, Assignment, Test

CO 4	Design programs for different operations on data structure.	Exam MST, Practical, Test
CO 5	Identify different sorting and searching techniques.	Exam MST, Practical, Test
CO6	Develop program for sorting and searching.	Exam MST, Practical, Test

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAM : BCA-I (2nd SEM)

NAME OF THE COURSE : BASIC MATHS (BCA-125)

NAME OF FACULTY : KIRANDEEP KAUR (ASST. PROF.)

C.O. No.	Description of Course Outcome	Methods of Assessment
CO-1	Reason mathematically about basic discrete structures such as numbers, sets, used in computer science.	Group discussion, board class assignments.
CO-2	Evaluate Group, Ring and Fields and 2D Geometry.	Authentic problem solving, assignments, class tests.
CO-3	Familiarity with Determinant and Matrices.	Authentic problem solving, black board test, assignments.
CO-4	Formulate Limit, Continuity and Differentiability	Authentic problem solving, assignments, class tests.

CO-5	Demonstrate a working knowledge Definite and Indefinite Integrals.	Authentic problem solving, black board test, assignments, group discussion.
CO-6	Explore the properties of complex numbers.	Authentic problem solving, black board test, assignments, class tests.

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAM : BCA-I (2nd SEM)

NAME OF THE COURSE : DRUG ABUSE: PROBLEM, MANAGEMENT AND PREVENTION

NAME OF FACULTY : RAKESH JOSHI (ASST. PROF.)

CO No.	Description of Course Outcomes	Method/s of Assessment
CO 1	Identify the biological, environmental, behavioral, and social causes and consequences of drug use and addiction across the lifespan	Exam, MST, Test , Assignment
CO 2	Classify strategies to prevent drug use and its consequences	Exam MST, MCQs, Practical

CO 3	Identify the symptoms of drug addiction.	Exam MST, Assignment, Test
CO 4	Demonstrate impact of drug use across the lifespan.	Exam MST, Quiz, Test
CO 5	Describe methods of prevention and controls	Exam MST, Essay writing, Test
CO6	Identify the nature if problems using drugs	Exam MST, Presentation, Test

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAM : BCA – 2 (3rd SEM)

NAME OF THE COURSE : ENGLISH COMMUNICATION SKILLS I (BCA-211)

NAME OF FACULTY : GAGANDEEP KAUR (ASST. PROF.)

CO No.	Description of Course Outcomes	Method/s of Assessment
CO 1	Compare and contrast different genres of essays.	MST, Class tests, Class Assignment.
CO 2	Explain major themes of essays that will make students capable to raise significant question, to enhance their creative expressions and reach well reasoned conclusion.	MST, Class Assignment, Class tests, .
CO 3	Develop critical creative thinking skills that will make students enable to write essays and differentiate between objective and subjective writing.	MST, Class assignments, Class tests,
CO 4	Apply the LSRW skills.	MST, PPTs..
CO 5	Practice English grammar to aware the students about the correct usage of it.	MST, Participation in class, Class assignments, Class tests.
CO 6	Develop the fluency of language, and presentation skills.	MST, Participation in class, Class assignments, Class tests.

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAM : BCA – 2(3rd SEM)

NAME OF THE COURSE : DISCREATE MATHAMATICS-I (BCA-212)

NAME OF FACULTY : SANJEEVANI (ASST. PROF.)

C.O. No.	Description of Course Outcome	Method/s of Assessment
CO-1	Determine when a function is one-one and onto.	Group Discussion
CO-2	Demonstrate different traversal methods for trees.	Class Assignment/Authentic problem solving
CO-3	Model Problems in Computer Science using graphs.	Group Discussion/ Class Assignment
CO-4	Apply Counting Principle to determine Probability.	Authentic Problem Solving/ Seminar

CO-5	Work in a group to understand finite state machine language.	Class Assignment/Group Discussion
CO-6	Discriminate between an Eulerian Graph from a Hamiltonian graph for use in solving mathematical problems.	Class Assignment/ Group Discussion/ Authentic Problem Solving

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAM : BCA – 2 (3rd SEM)

NAME OF THE COURSE : COMP. SYS. ORG & ARCH... (BCA-213)

NAME OF FACULTY : NEETU SHARMA (ASST. PROF.)

C.O. No.	Description of Course Outcome	Methods of Assessment
CO-1	Recognize the organization of computer, its design.	Class Test
CO-2	Explain the working of CPU, ALU and Register transfer Language.	Discussion Method, Viva
CO-3	Demonstrate the Memory organization, Virtual memory and DMA .	Class Test, MST
CO-4	Calculate Number System, binary codes, Boolean laws to minimize the Boolean expression and also design K-Maps for expressions.	Class Assignment, Home Assignment

CO-5	Design various combinational and sequential circuits	Assignment, MST
CO-6	Compare the working of different types of registers.	MST

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA -2 (3rd SEM)

NAME OF COURSE : OOPs USING C++ (BCA-214)

NAME OF FACULTY : MAMTA DEVI

C.O. No.	Description of Course Outcome	Methods of Assessment
CO-1	Define the procedural and object-oriented paradigm with concepts of streams, classes, functions, data and objects.	Discussion Method ,Class Test, Lab
CO-2	Recognize dynamic memory management techniques using pointers, constructors, destructors, etc.	Discussion Method, Class Test

CO-3	Demonstrate the use of various OOPs concepts with the help of programs.	Class Test, MST
CO-4	Categorize inheritance with the understanding of early and late binding, usage of exception handling, generic programming..	Class Assignment, Home Assignment
CO-5	Develop the programs to apply concept of function overloading, operator overloading, virtual functions and polymorphism.	Assignment, MST
CO-6	Compare the concepts of C and C++.	MST, Lab Work , MST

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA -2 (3rdSEM)

NAME OF COURSE : DATABASE MANAGEMENT SYSTEM (BCA-215)

NAME OF FACULTY : TARANJEET KAUR

C.O. No.	Description of Course Outcome	Method/s of Assessment
CO-1	Define the basic concepts and appreciate the applications of database systems	MST, CLASS TEST, VIVA
CO-2	Discuss the advantages of DBMS applications over traditional file systems.	MST, ASSIGNMENT, GD
CO-3	Describe the various components of DBMS environment and their functions.	MST, PPT, CLASS TEST
CO-4	Generate solutions to model the data requirement for an application using ER model and normalization approach.	MST, ASSIGNMENT, CLASS TEST

CO-5	Formulate the queries to select, design, modify and other operation on database using MS ACCESS.	MST, LAB WORK, PPT, VIVA
CO-6	Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database.	MST, ASSIGNMENT, CLASS TEST

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA -2 (3rdSEM)

NAME OF COURSE : EVS (BCA-219) – QUALIFYING EXAM

NAME OF FACULTY : IQBAL SINGH

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Describe the scope and importance concept of Biosphere	Assignments/Exams/Class Tests
CO-2	Explain ecosystem and its components,Biodiversity	Class Test/Group Discussion
CO-3	Explain natural resources–renewable and non -renewable resources.	Class Test/Group Discussion
CO-4	Describe environmental Pollution, Types, Causes, Effects and Controls.	Assignments/Exams/Class Tests

CO-5	Discuss environmental protection laws in India.	Class Test/Group Discussion
CO-6	Describe Human Communities and the Environment	Assignments/Exams/Class Tests

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA -2 (3rdSEM)

NAME OF COURSE : PUNJABI (BCA-219)

NAME OF FACULTY : DR.HARPREET KAUR

C.O. No.	Description Of Course Outcomes	Method/s Of Assessments
CO-1	Awpxy ivcwr r`Kx kwrn Awpxw p`K spSt krn dy smr`Q ho jWdw hY[	jmwqI tYst,AwpsI ivcwr vtWdrw
CO-2	koeI vI cIz mMgvwaux, Byjx jW iSkwieq suxn,krn dy smr`Q ho jWdw hY[	AsweInmYNt
CO-3	iksy vI BwSw dI vwk bxqr smJx dy smr`Q ho jWdw hY[	jmwqI tYst, AwpsI ivcwr vtWdrw

CO-4	vwk dI ivauNqbMdI is`Kx kwrn BwSw mwihr bxdw hY[	qKqw tYst
CO-5	v`fI g`l nUM QoHVy SbdW iv`c kihx dy smr`Q ho jWdw hY[	AwpsI ivcwr vtWdrw
CO-6	sihj rUp iv`c Biv`K leI iqAwr huMdw hY[	AsweInmYNt

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA -2 (4thSEM)

NAME OF COURSE : ENGLISH COMMUNICATION SKILLS II (BCA-221)

NAME OF FACULTY : GAGANDEEP KAUR (ASST. PROF.)

CO No.	Description of Course Outcomes	Method/s of Assessment
CO 1	Develop critical and creative thinking skills by examine novel.	MST, Class tests, Class Assignment.
CO 2	Compare and contrast of characters of the Novel.	MST, Class Assignment, Class tests.
CO 3	Demonstrate an appreciation of the literature through discussion and written analysis.	MST, Class assignments, class tests.
CO 4	Develop the fluency of language, presentation skills and creative thinking through dialogue writing.	MST, Class tests.
CO 5	Practice English grammar to aware the students about the correct usage of it.	MST, Participation in class, Class assignments, Class tests.
CO 6	Apply the LSRW skills.	MST, Participation in class, Class assignments, Class tests.

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : **DEPARTMENT OF COMPUTER SCIENCE**

NAME OF THE PROGRAMME : **BCA -2 (4thSEM)**

NAME OF COURSE : **COMPUTER NETWORKS (BCA-222)**

NAME OF FACULTY : **MAMTA RAJPUT (ASST. PROF.)**

C.O.No.	Description of Course Outcomes	Methods of Assessment
CO-1	Define Computer Network, Network Hardware and software hierarchies.	Discussion Method, Assignment,Class Test
CO-2	Explain OSI Model and TCP/IP Model in detail	Class Test, PPT,Assignment

CO-3	Illustrate the services to the transport layer, routing Algorithms.	Assignment, Discussion, MST
CO-4	Differentiate LAN, MAN, WAN, network structure and Architecture.	Assignment, Discussion Method, Class Test, PPT
CO-5	Write the different network security methods, Algorithms etc.	Class Test, MST
CO-6	Compare the difference between the reference models like difference between the OSI model and TCP/IP model	MST, Assignment, PPT

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : **DEPARTMENT OF COMPUTER SCIENCE**

NAME OF THE PROGRAMME : **BCA -2 (4th SEM)**

NAME OF COURSE : **MANAGEMENT INFO. SYSTEM (BCA-223)**

NAME OF FACULTY : **IQBAL SINGH (ASST. PROF.)**

C.O. No.	Description of Course Outcome	Method/s of Assessment
CO-1	Analysis business information and systems to facilitate evolution of satrapies alternatives.	Assignments/ Exams/Class Tests
CO-2	Describe meaning, definition and role of information system.	Class Test/Group Discussion
CO-3	Discuss the role and importance of management system.	Class Test/Group Discussion
CO-4	Develop MIS with different models.	Assignments/Exams/Class Tests
CO-5	Show the applications of information systems in Functional areas.	Class Test/Group Discussion

CO-6	Explain Definition and characteristics of Decision Support Systems.	Assignments/Exams/Class Tests

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : **DEPARTMENT OF COMPUTER SCIENCE**

NAME OF THE PROGRAMME : **BCA -2 (4th SEM)**

NAME OF COURSE : **COMPUTER ORIENTED NUMERICAL AND STATISTICAL METHODS (BCA-224)**

NAME OF FACULTY : **RUPINDER KAUR (ASST. PROF.)**

C.O. No.	Description of Course Outcome	Method/s of Assessment
CO-1	Calculate the correlation coefficient for the given data.	Group discussion/ Authentic problem Solving.
CO-2	Find intermediate values by using Newton's forward and backward formula and Lagrange's formula.	Class Assignment/Authentic problem solving
CO-3	Explore the properties of differential equation by Euler, Taylor and Range Kutta method.	Group discussion/ Class Assignment
CO-4	Derive Simpson's 1/3, 3/8 rules using trapezoidal rule.	Authentic problem Solving/ Seminar

CO-5	Develop deeper and rigorous understanding of moment's newness and Kurtosis.	Class Assignment/Group Discussion
CO-6	Use Strategies introduced for determining the methods of mean, median and mode.	Class Assignment/ Group Discussion/ Authentic problem solving

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DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA -2 (4th SEM)

NAME OF COURSE : RELATIONAL DATABASE MANAGEMENT SYSTEM (BCA-225)

NAME OF FACULTY : TARANJEET KAUR(ASST. PROF.)

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Identify the basic concepts and various data model used in database design ER modeling concepts and architecture use and design queries using SQL	MST, Class Test, Viva
CO-2	Apply relational database theory and be able to describe relational algebra expression, tuple and domain relation expression fro queries	MST, Assignment, Lab Work

CO-3	Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database	MST, Ppt, Class Test
CO-4	Recognize/ identify the purpose of query processing and optimization and also demonstrate the basic of query evaluation.	MST, Lab Work, Class Test
CO-5	Apply and relate the concept of transaction, concurrency control and recovery in database.	MST, Assignment, Ppt, Viva
CO-6	Discuss recovery system and be familiar with introduction to web database, distribute databases, data warehousing and mining.	MST, Assignment, Class Test

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE BELA ROPAR PUNAJB

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA -2 (4th SEM)

NAME OF COURSE : PUNJABI (BCA-228)

NAME OF FACULTY : DR. HARPREET KAUR(ASST. PROF.)

C.O. No.	Description Of Course Outcomes	Method/s Of Assessments
CO-1	vwrqk ivvyk pusqk dy lyK pVn nwl Awpxy ivcwr r`Kx kwrn Awpxw p`K spSt krn dy smr`Q ho jWdw hY[	jmwqI tYst,AwpsI ivcwr vtWdrw
CO-2	ic`TI p`qr is`K ky koeI vI cIz mMgvwaux, Byjx jW iSkwieq suxn, krn dy smr`Q ho jWdw hY[	AsweInmYNt
CO-3	Sbd bxqr qy Sbd rcnw dy p`K nUM is`K ky iksy vI BwSw dI Sbd bxqr nUM smJx dy smr`Q ho jWdw hY[	jmwqI tYst, AwpsI ivcwr vtWdrw

CO-4	au`p BwSwvW dy igAwn nwl BwSw dI ivauNqbMdI is`Kx kwrn BwSw mwihr bxdw hY[	qKqw tYst
CO-5	Coty au`qrW vwly pRSnW nwl isiKAwrQI v`fI g`l nUM QoHVy SbdW iv`c kihx dy smr`Q ho jWdw hY[	AwpsI ivcwr vtWdrw
CO-6	sihj rUp iv`c Biv`K dIAW sMBwvnwvW leI iqAwr huMdw hY[	AsweInmYNt

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE BELA ROPAR PUNAJB

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA – 3 (5th SEM)

NAME OF COURSE : ENGLISH LITERARY SKILLS II (BCA- 311)

NAME OF FACULTY : GAGANDEEP KAUR (ASST. PROF.)

CO No.	Description of Course Outcomes	Method/s of Assessment
CO 1	Defining characteristics of poetry so that students will be able to explore a variety of poetic genres.	MST, Class Tests, Class Assignment.
CO 2	Develop the ability to respond to a variety of situation and contexts by shifting voice, tone, level formality, design, medium and structure.	MST, Class Assignment, Class Tests.
CO 3	Designing job application for formal communication.	MST, Class Assignments, class Tests.
CO 4	Apply the LSRW skills.	MST, PPTs.

CO 5	Practice English grammar to aware the students about the correct usage of it.	MST, Participation in class, Class Assignments, Class Tests.
CO 6	Develop the fluency of language, presentation skills and creative writing.	MST, Participation in class, Class Assignments, Class Tests.

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE BELA ROPAR PUNAJB

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA – 3 (5th SEM)

NAME OF COURSE : SYSTEM ANALYSIS & DESIGN (BCA- 312)

NAME OF FACULTY : IQBAL SINGH (ASST. PROF.)

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Describe the system, types of system, functions of system.	Quizzes/Objective Test/Assignments/Exams
CO-2	Explain various phases of System Development Life Cycle.	Quizzes/Objective Test/Assignments/Exams
CO-3	Create structured analysis tools and System Design.	Group Discussing/Reports

CO-4	Design feasibility Study.	Reports
CO-5	Demonstrate system implementation and perform maintenance.	Tests/Quizzes
CO-6	Select hardware and software for system implementation.	Class Test/Exams

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE BELA ROPAR PUNAJB

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA – 3 (5th SEM)

NAME OF COURSE : SYSTEM SOFTWARE (BCA- 313)

NAME OF FACULTY : MAMTA DEVI (ASST. PROF.)

C.O. No.	Description of Course Outcome	Methods of Assessment
CO-1	Recognize the system software and its types like editors, compiler, assembler, linker, loader, interpreter and debugger..	Class Test, Assignment, Discussion
CO-2	Describe the various concepts of assemblers and macro-processors.	MST, Class Test
CO-3	Demonstrate the various phases of compiler and compare its working with assembler	Assignment, Class Test, MST

CO-4	Analyzehow linker and loader create an executable program from an object module created by assembler and compiler.	Class Test, PPT
CO-5	Write the various editors and debugging techniques	MST,Class Test
CO-6	Compare the different software tools for programming development.	Class Test, Assignment, MST

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE BELA ROPAR PUNAJB

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEAPRTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAMME : BCA – 3 (5th SEM)

NAME OF COURSE : JAVA PROGRAMMING (BCA- 314)

NAME OF FACULTY : NEETU SHARMA (ASST. PROF.)

C.O. No.	Description of Course Outcome	Methods of Assessment
CO-1	Describe the procedural and object oriented paradigm and OOP's concepts.	Class Test, Assignment, Discussion
CO-2	Knowledge of the structure and model of the Java Programming	MST, Class Test
CO-3	To provide the knowledge about Java tokens, statements, constant , variables & data types.	Assignment, Class Test, MST

CO-4	Describe the concept of classes, objects, members of a class.	Class Test, PPT
CO-5	Classify inheritance with the understanding of early and late binding, implementing multiple inheritance by using interface usage of exception handling.	MST,Class Test
CO-6	Demonstrate the use of Multithreading with the help of programs.	Class Test, Assignment, MST

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE, BELA,ROPAR, PUNJAB.

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAM : BCA – 3 (5th SEM)

NAME OF THE COURSE : WEB DESIGNING WITH HTML

NAME OF FACULTY : RAKESH JOSHI (ASST. PROF.)

CO No.	Description of Course Outcomes	Method/s of Assessment
CO 1	Describe markup languages and the concepts of HTML & DHTML.	Univ. Exam, MST, Test , Assignment
CO 2	Identify the terminology and concepts of the Internet and web designing.	Exam MST, Assignment, MCQs, Quiz
CO 3	Apply and Contrast markup languages and programming languages.	Exam MST, Assignment, Test

CO 4	Develop static web pages using html tags.	Exam MST, Practical, Project
CO 5	Create a forms and frames.	Exam MST, Practical, Project
CO6	Design frames and use CSS sheets.	Exam MST, Practical, Project

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE, BELA,ROPAR, PUNJAB.

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF HUMANITIES

NAME OF THE PROGRAM : BCA – 3 (5th SEM)

NAME OF THE COURSE : PUNJABI (G) (BCA-317)

NAME OF FACULTY : HARPREET SINGH (ASST. PROF.)

CO No.	Description of Course Outcomes	Method/s of Assessment
CO 1	b`icAW nUM mW bolI iv`c is`iKAw dy ky auhnW nUM sihj rUp iv`c Awaux vwly Biv`K leI iqAwr krnw[	Class Behavior, GD
CO 2	pMjwbI BwSw rwNhI ividAwrQIAW nUM lok-Dwrw dy ivSy pVHw ik auhnW iv`c v`K-v`K hunrW dI hunrmMdI krnI[	MST, Seminar

CO 3	ivAwkrx duAwrw AwpxI BwSw iv`c prp`k krn dy nwl-nwl hornW BSwvW nUM is`Kx iv`c inpuMn bxwaux dw mnorQ[	MST, Quiz, Seminar
CO 4	pMjwbI BwSw iv`c l`gy pwTkrm duAwrw smwijk,AwriQk,rwjiniqk Aqy vwqwvrx Awid KyqrW iv`c smwXojn krnw isKwauxw[	MST, Seminar, GD
CO 5	Awpxy gOrvmeI ivrsy nUM AglIAW pIVIAW nUM hsqwNqirq krn leI syD dyxI[	MST, Seminar, GD, Role play examples
CO6	ijMdgI nUM boJ nw smJky klwmeI FMg nwl jIauxw isKwauxw[	MST, Participation in class, Initiatives taken.

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE, BELA,ROPAR, PUNJAB.

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF HUMANITIES

NAME OF THE PROGRAM : BCA – 3 (6th SEM)

NAME OF THE COURSE : ENGLISH LITERARY SKILLS II (BCA-321)

NAME OF FACULTY : GAGANDEEP KAUR (ASST. PROF.)

CO No.	Description of Course Outcomes	Method/s of Assessment
CO 1	Defining characteristics of poetry so that students will be able to explore a variety of poetic genres.	MST, Class tests, Class Assignment.
CO 2	Develop the ability to respond to a variety of situation and contexts by shifting voice, tone, level formality, design, medium and structure.	MST, Class Assignment, Class tests.
CO 3	Designing job application for formal communication.	MST, Class assignments, class tests.
CO 4	Apply the LSRW skills.	MST, PPTs.

CO 5	Practice English grammar to aware the students about the correct usage of it.	MST, Participation in class, Class assignments, Class tests.
CO 6	Develop the fluency of language, presentation skills and creative writing.	MST, Participation in class, Class assignments, Class tests.

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE, BELA,ROPAR, PUNJAB.

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF HUMANITIES

NAME OF THE PROGRAM : BCA – 3 (6th SEM)

NAME OF THE COURSE : E-COMMERCE (BCA-322)

NAME OF FACULTY : MANDEEP SINGH (ASST. PROF.)

C.O. No.	Description of Course Outcome	Method/sof Assessment
CO-1	Define and differentiate various types of e-commerce.	Objective Test/Assignments/ Exams/Class Tests
CO-2	Explain payment System for e-commerce.	Class Test/Group Discussion
CO-3	Describe the process of selling and marketing on web..	Class Test/Group Discussion
CO-4	Classify internet, www, security and web.	Lab work/Home Assignments

CO-5	Describe Consumer-oriented applications.	MCQ Test/Home Assignments
CO-6	Explain Electronic Data Interchange and Legal, Ethical and other public policy issues related to e-commerce	Assignments/ Class Test

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE, BELA,ROPAR, PUNJAB.

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF HUMANITIES

NAME OF THE PROGRAM : BCA – 3 (6th SEM)

NAME OF THE COURSE : OPERATING SYSTEM (BCA-323)

NAME OF FACULTY : IQBAL SINGH (ASST. PROF.)

C.O. No.	Description of Course Outcome	Method/s of Assessment
CO-1	Discuss the operating system, types and functions of operating system.	Objective Test/Assignments/ Exams/Class Tests
CO-2	Practice various CPU scheduling algorithm.	Problem Solving/ Class Test/Group Discussion
CO-3	Identify Deadlock condition in operating system, Explain various deadlock preventions techniques.	Problem Solving/ Class Test/Group Discussion

CO-4	Explain memory hierarchy, methods of memory access and memory allocation techniques.	Assignments/Exams/Class Tests
CO-5	Practice various page replacement algorithm and disk allocation algorithm.	Problem Solving/ Class Test/Group Discussion
CO-6	Explain various security techniques. Threats, Cryptography.	Assignments/Exams/Class Tests

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE, BELA,ROPAR, PUNJAB.

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF HUMANITIES

NAME OF THE PROGRAM : BCA – 3 (6th SEM)

NAME OF THE COURSE : SOFTWARE ENGINEERING (BCA-324)

NAME OF FACULTY : MANPREET KAUR (ASST. PROF.)

C.O. No.	Description of Course Outcome	Methods of Assessment
CO-1	Define the procedural and object-oriented paradigm with concepts of streams, classes, functions, data and objects.	Discussion Method ,Class Test, Lab
CO-2	Recognize dynamic memory management techniques using pointers, constructors, destructors, etc.	Discussion Method, Class Test
CO-3	Demonstrate the use of various OOPs concepts with the help of programs.	Class Test, MST

CO-4	Categorize inheritance with the understanding of early and late binding, usage of exception handling, generic programming..	Class Assignment, Home Assignment
CO-5	Develop the programs to apply concept of function overloading, operator overloading, virtual functions and polymorphism.	Assignment, MST
CO-6	Compare the concepts of C and C++.	MST, Lab Work , MST

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE, BELA,ROPAR, PUNJAB.

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF HUMANITIES

NAME OF THE PROGRAM : BCA – 3 (6th SEM)

NAME OF THE COURSE : WEB DESIGN USING ASP.NET (BCA-325)

NAME OF FACULTY : MAMTA RAJPUT (ASST. PROF.)

C.O. No.	Description of Course Outcome	Methods of Assessment
CO-1	Define Genesis of .NET, advantages and disadvantages of .net framework.	Class Test, Discussion, Lab work
CO-2	Describe Common Language system, Microsoft intermediate languages, meta data, .Net types.	MST, Class Test, PPT
CO-3	Illustrate Variables, Constants, data types, Operators, Array events.	Assignment, Class Test, MST
CO-4	AnalyzeValidation control, Validation summary Control.	Class Test, PPT

CO-5	Design dropdown list control, Radio Button, list control, Grid view controls.	MST,Class Test, Lab work
CO-6	Attach the pages using Master Pages in ASP .NET.	Lab Work, MST

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE, BELA,ROPAR, PUNJAB.

DESCRIPTION OF COURSE OUTCOMES

NAME OF THE DEPARTMENT : DEPARTMENT OF COMPUTER SCIENCE

NAME OF THE PROGRAM : BCA – 3 (6th SEM)

NAME OF THE COURSE : PUNJABI (G)

NAME OF FACULTY : HARPREET SINGH (ASST. PROF.)

CO No.	Description of Course Outcomes	Method/s of Assessment
CO 1	b`icAW nUM mW bolI iv`c is`iKAw dy ky auhnW nUM sihj rUp iv`c Awaux vwly Biv`K leI iqAwr krnw[	Class Behavior, GD
CO 2	ijMdgI dy v`K-v`K pwqrW dI pySkwrI rwhIN sm`isAwvW nwl islJx dI klw dyxI[	MST, Seminar
CO 3	ivAwkrx duAwrw AwpxI BwSw iv`c prp`k krn dy nwl-nwl hornW BSwvW nUM is`Kx iv`c inpuMn bxwaux dw mnorQ[	MST, Quiz, Seminar
CO 4	ividAwrQIAW nUM pMjwbI BwSw iv`c l`gy pwTkrm duAwrw smwijk,AwriQk,rwjiniqk Aqy vwqwvrx Awid KyqrW iv`c smwXojn krnw isKwauxw[	MST, Seminar, GD

CO 5	Awpxy gOrvmeI ivrsy nUM AglIAW pIVIAW nUM hsqwNqirq krn leI syD dyxI[	MST, Seminar, GD, Role play examples
CO6	ijMdgI nUM boJ nw smJky klwmeI FMg nwl jIauxw isKwauxw[	MST, Participation in class, Initiatives taken.

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE, BELA RUPNAGAR PUNJAB

MAPPING OF PROGRAM OUTCOME VERSUS COURSE OUTCOME
INTERNAL QUALITY ASSURANCE CELL

NAME OF DEPARTMENT ==> DEPARTMENT OF COMPUTER SCIENCE

NAME OF PROGRAMME ==> BCA

NAME OF COURSES ==> 35

CORRELATION LEVEL:1,2, and 3;1SLIGHT (LOW); 2MODERATE (MEDIUM) 3 HIGH — MENTION GAP ANALYSIS AT THE END

S.NO	Year	Semester	Name of Course/Code		PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 1	PO11	PO12	PO13	PO14	PO15
1	1st	1st	General English – I	CO 1							1		2						1
				CO 2									2						
				CO 3															
				CO 4							1		2						2
				CO 5									2						2
				CO 6									2						2
2			Punjabi (Compulsory) or Punjabi Compulsory (Mudla Gyan)	CO 1							1		2						1
				CO							1	2							1

				2															
				CO 3									2						1
				CO 4									2						1
				CO 5					2		1	1	1						1
				CO 6					1				1						1
3			**Fundamentals of Information Technology**	**CO 1**	2		3							1	2	1	1	2	1
				CO 2	3	2		2							2	1	2	1	
				CO 3	3	3	1	2			2		1	2	3	1	3	3	
				CO 4	3	3	2	2	1	1	2		2	2	2	2	2	3	
				CO 5	2	1	1	2							2	2	2	2	
				CO 6	2	2							2	2	2	2	2	1	
4			**Programming Fundamentals using C**	**CO 1**	2	3	3	2	1	1	1	1	1	2	1	2	1	3	1
				CO 2	1	2	3	2		1			1	2	2	2	1	3	
				CO 3	3	3	3	2		1	1	1		2	2	2		2	1
				CO 4	3	3	2	3		1				2	3	2		2	1
				CO 5	3	2	2	2						2	3	2	2	1	1
				CO	3	2	2	2						2	3	2	2	1	1

				6															
5	**1st**	**2nd**	**General English – II**	**CO 1**							1		3						2
				CO 2									1						
				CO 3									1						2
				CO 4									3						2
				CO 5									2						3
				CO 6									3						2
6			**Punjabi (Compulsory) or Punjabi Compulsory (Mudla Gyan)**	**CO 1**							1		2						1
				CO 2							1	2							1
				CO 3									2						1
				CO 4									2						1
				CO 5					2		1	1	1						1
				CO 6					1				1						1
7			**Digital Electronics**	**CO 1**	2	1	1	1		1		1		2	3	2	3		1
				CO 2	2	2	1	1		1		1		3	2	2	3		1
				CO 3	1	2	3	1		1		1		2	2	2	3	1	1
				CO	3	3	3	2	1	1		1		1	2	2	3	1	1

				4																
				CO 5	3	3	3	2	1	1		1		3	3	3	3	1	1
				CO 6	2	3	3	2		1		1		3	3	3	3	1	1
8			**Data Structures**	**CO 1**	3		1	2		1		2		3	3	1	1	1	
				CO 2	3		1	2		1		2		3	3	1	1	1	
				CO 3	3	3	3	3		1	1			3	2	3	2	2	1
				CO 4	3	3	3	3		1	1			3	2	3	2	2	1
				CO 5	3	3	3	3		1	1			3	2	3	2	2	1
				CO 6	3	3	3	3		1	1			3	2	3	2	2	1
9			**Basic Mathematics**	**CO 1**	1	1		2	1			1		1		2		1	1
				CO 2	1		2		1		1	2			1		1		1
				CO 3	1	1		1		1		1		1	2	2	1	1	1
				CO 4	2	1	1		1		1		1		2	1	1	1	2
				CO 5		1	2	1						1				1	2
				CO 6	1		1	2								1		1	1
1			**Drug Abuse : Problem, Management and Prevention**	**CO 1**					3	3	3	1							
				CO					3	3	3	1							

				2															
				CO 3					3	3	3	1							
				CO 4					3	3	3	1							
				CO 5					3	3	3	1							
				CO 6					3	3	3	1							
11	**2nd**	**3rd**	**English Communication Skills – I**	**CO 1**									1						
				CO 2															2
				CO 3									2						
				CO 4									3						2
				CO 5									2						2
				CO 6									3						2
12			**Discrete Mathematics**	**CO 1**	1			2			2			2	2	2		2	2
				CO 2	1				1		2					1		1	2
				CO 3	1	1	1	1	2		1		2	1	2	2	1	1	1
				CO 4	1			1			1								1
				CO 5	1		2	2		2					2		2		2
				CO	1		1					2		2				2	2

				6																
13			**Computer System Organizations and Architecture**	**CO 1**	1	2	1	1		1		1	1	1		1	1	1	1
				CO 2	2	2	1	2			1			2	2	1		1	1
				CO 3	1	1	2	2	1	1	1	1		2	2	1	2	1	1
				CO 4	2	1	2	2	3	1	2	1	1	2	2	2	3	1	1
				CO 5	1	3	2	2	2	2		2	2		2	2	3	2	1
				CO 6	2	3	3	3	3	1	1	1		2	2	3	3	2	1
14			**Object Oriented Programming using C++**	**CO 1**	3	3	3	3	1	1				1	2	2	1	2	1
				CO 2	3	3	2	2	1	1				1	2	2	1	2	
				CO 3	3	2	2	2	2	2				2	2	1	1	2	1
				CO 4	3	2	2	1	2	2				1	2	1	2	1	1
				CO 5	3	2	2	1	2	1				2	2	2	1	2	1
				CO 6	2	2	2	2	2	1				1	1	1	1	2	1
15			**Fundamentals of Database Management System**	**CO 1**	1	1	2	1		1		1			1	2	1	1	1
				CO 2	1	1	1	1		1		1			1	2	1	1	1
				CO 3	1	2	2	1		1		1			1	2	1	1	1
				CO	2	3	3	1	1	1		1			3	3	3	2	1

				4																
				CO 5	1	3	3	1	1	1		1			3	2	3	2	1
				CO 6	1	2	2	1		1		1			3	2	3	2	1
16			**Environment Studies (Qualifying Exam)**	**CO 1**					3	2	2								
				CO 2					3	2	2	1							
				CO 3					3	2	2	1							
				CO 4					3	2	2	1							
				CO 5					3	2	2	1							
				CO 6					3	2	2	1							
17			**Punjabi (Compulsory) or Punjabi Compulsory (Mudla Gyan)**	**CO 1**							1		2						1
				CO 2							1	2							1
				CO 3									2						1
				CO 4									2						1
				CO 5					2		1	1	1						1
				CO 6					1				1						1
18	**2nd**	**4th**	**English Communication Skills – II**	**CO 1**															1
				CO															1

				2																
				CO 3																1
				CO 4										3						2
				CO 5										2						1
				CO 6										3						2
19			**Computer Networks**	**CO 1**	3	3	3	3	2	2	2			2	2	2	2	2	
				CO 2	3	2	2	1	1	1				1	2	2	2	2	
				CO 3	1	2	2	2		1	1				2	2	2	2	
				CO 4	3	3	3	3	3	3	3			2	3	3	1	2	
				CO 5	2	2	2	2	1		1		1	2	2	2	2	2	
				CO 6	1	1	1	1	2	2	2			2	2	2	1	2	
2			**Management Information Systems**	**CO 1**		1		1							1	2	1	1	
				CO 2	1	2	2	2	2							1	1	1	
				CO 3	1	2	2	2	2	2						1	1	1	
				CO 4	1	3	1	2	1	1					1	1	1	1	
				CO 5	2	2	2	2							2	2	2	2	
				CO		3	3	2	1						1	2	2	1	

				6																
21			**Computer Oriented Numerical and Statistical Methods**	**CO 1**	1		2									1	2	1	1
				CO 2	1		2								1		1	1	
				CO 3	1		2							1				1	1
				CO 4	1		2							1			1	1	1
				CO 5	1	1								1			1	1	
				CO 6	1		1							1			1		1
22			**Relational Database Management Systems with Oracle**	**CO 1**	3	2	2	3		1		1		1	3	1	1	2	1
				CO 2	3	1	1	1		1		1		1	3	1	1	1	2
				CO 3	3	2	3	3		1		1		3	3	2	1	2	2
				CO 4	3	3	3	3	1	1		1		3	3	3	3	2	2
				CO 5	3	3	3	3	1	1		1		3	3	3	3	3	2
				CO 6	3	3	3	3		1		1		3	3	3	3	3	2
23			**Punjabi (Compulsory) or Punjabi Compulsory (Mudla Gyan)**	**CO 1**							1		2						1
				CO 2							1	2							1
				CO 3									2						1
				CO									2						1

				4																
				CO 5					2		1	1	1							1
				CO 6					1				1							1
24	**3rd**	**5th**	**English Literary Skills – I**	**CO 1**																1
				CO 2									2							1
				CO 3																1
				CO 4									2							1
				CO 5									3							2
				CO 6							2		3							2
25			**System Analysis and Design**	**CO 1**	1	2	2	2	1	2						2	2	1		
				CO 2	1	2	2	3	1	1				1		1	1	1		
				CO 3	2	2	2	2	1	1				1		1	1	1		
				CO 4	1	3	3	2	1	1					1	1	1	1		
				CO 5	1	2	2	2	2	2						1	1	1		
				CO 6	1	3	3	3	1	1						1	1	1		
26			**System Software**	**CO 1**	2	2	2	3	2	3				2	2	2	2	3	1	
				CO	3	2	2	2	2	3				2	2	2	2	3	1	

				2																
				CO 3	2	2	2	3	2	3				2	2	1	2	3	
				CO 4	2	2	2	1	2	2				2	2	1	2	3	1
				CO 5	3	3	3	3	3	3	1		1	2	2	2	2	2	2
				CO 6	3	3	3	3	3	3	1	1	1	2	2	2	2	2	1
27			**Java Programming**	**CO 1**	3	3	3	3	1	3	3	3	1	3	2	3	2	3	3
				CO 2	3	3	3	3	1	3	2	3	1	2	3	3	3	3	3
				CO 3	3	3	3	3	1	3	2	3	1	3	3	3	3	3	3
				CO 4	3	3	3	3	1	3	3	3	1	3	3	3	3	3	3
				CO 5	3	3	3	3	1	3	3	3	1	3	3	3	3	3	3
				CO 6	3	3	3	3	1	3	3	3	1	3	3	3	3	3	3
28			**Web Designing using HTML and DHTML**	**CO 1**	3	2		3	2	1	2	3	1	3	3	3	2	3	3
				CO 2	3	2	2	2		1	2	3		2	3	1	3	3	3
				CO 3	2	3	2	3	1	2	2	1	1	2	3	2	3	3	
				CO 4	3	2	1	3	2	2	2	3	3		3	3	2	3	3
				CO 5	3	2	1	3	2	2	2	3	3		3	3	2	3	3
				CO	3	2	1	3	2	2	2	3	3		3	3	2	3	3

				6															
29			**Punjabi (Compulsory) or Punjabi Compulsory (Mudla Gyan)**	**CO 1**					1				3						2
				CO 2					1				3						2
				CO 3					3				3						2
				CO 4					2				2						3
				CO 5					3				3						2
				CO 6					2				3						3
3	**3rd**	**6th**	**English Literary Skills – II**	**CO 1**									2						1
				CO 2									2						1
				CO 3							1		2						1
				CO 4									3						2
				CO 5							1		2						1
				CO 6							1		3						
31			**ECommerce**	**CO 1**	2	2	1	2	2		2				2				
				CO 2	2	2								2	2	2	1	1	1
				CO 3	1	1		2						2	2	2	1	1	
				CO	2	2	1	2			2		1	2	2	2	1	1	

				4															
				CO 5	1	1		1	1					1	1	1	1	1	
				CO 6	2	2	1	1	2				1	2	2	2	2	2	
32			**Operating Systems**	**CO 1**	1	1	1	1	1	1					1	1	1	1	
				CO 2		3	1	2	1	1						1	1		
				CO 3		2	2	2	2	1						1	1	1	
				CO 4		2	2	1	1	1						1	1		
				CO 5		2	2	2								1	1		
				CO 6	2	1	1	1	1	1					2	1	2	1	
33			**Software Engineering**	**CO 1**	3	4	3	3	2	2	3	1	1	2	2	4	3	3	1
				CO 2	2	5	1	2	2	3	1	2		3	1	3	3	2	1
				CO 3	2	1	1	1	1	2	2	1		2	2		1	3	2
				CO 4	3	4	2	3	1	1	2	2		2	1	3	3	3	2
				CO 5	2	2	2	3	2	1	1	2		1		2	4	3	3
				CO 6	2	3	2	2	3	3	3	4	4	1		1	4	3	3
34			**Web Designing using ASP.NET**	**CO 1**	3	2	2	2		2				1	1	2	2	3	
				CO	3	2	2	2		1				1	1	2	2	3	

				2															
				CO 3	2	1	2	1		2				1	2	2	2	2	
				CO 4	3	3	3	3	2	2	1			1	2	2	2	2	
				CO 5	3	3	3	3	2	2	1			2	1	2	2	2	
				CO 6	3	3	3	3	2	2				1	1	1	2	3	
35			**Punjabi (Compulsory) or Punjabi Compulsory (Mudla Gyan)**	**CO 1**					3				3						2
				CO 2					3				2						3
				CO 3					2				3						2
				CO 4					3				3						1
				CO 5					2				3						1
				CO 6					3				2						2

ATTAINMENT OF PO BY DIRECT METHOD

COURSE ATTAINMENT CALCULATION FOR ALL COURSES IN THE SEMESTER

AMAR SHAHEED BABA AJIT SINGH JUJHAR SINGH MEMORIAL COLLEGE, ROPAR PUNJAB

INTERNAL QUALITY ASSURANCE CELL

PROGRAMME: BCA	SEMESTER: 6TH		YEAR: 2018-2019	DATE OF DECLARATION OF RESULT BY UNIVERSITY

S.NO.	NAME OF STUDENT	CLASS R.NO.	UNIVERSITY R. NO.	REGISTRATION NO.	English			E-Commerce			Operating system			Software Engineering			Web designing			Software Lab-XI			Software Lab-XII			Punjabi			Drug	EVS	TOTAL SUM	%age/ CGPA	ATTAINMENT LEVEL
					Theory	Internal	TOTAL (T+I)	Theory	Internal	TOTAL (T+I)	Theory	Internal	TOTAL (T+I)	Theory	Internal	TOTAL (T+I)	Theory	Internal	tOTAL	Theory	Internal	TOTAL	Theory	Internal	tOTAL	Theory	Internal	tOTAL					
1	Baljinder Kaur	1809	13361	814-16-395	26	9	35	33	22	55	39	21	60	10	22	32	31	22	53	33	12	45	32	12	44	48	23	71	Qualify	Qualify	363	45.38	1
2	Kiranjit Kaur	1806	13362	814-16-406	38	20	58	33	22	55	35	22	57	26	23	49	32	22	54	33	13	46	33	11	44	50	23	73	Qualify	Qualify	387	48.38	1

3	Sahijpreet Kaur	1805	13363	814-16-398	29	14	43	33	22	55	45	22	67	27	23	50	26	21	47	33	12	45	33	13	46	51	23	74	Qualify	Qualify	377	47.13	1
4	Kiranjit Kaur	1807	13364	814-16-396	35	18	53	32	22	54	34	22	56	26	23	49	37	23	60	33	13	46	32	12	44	57	22	79	Qualify	Qualify	392	49.00	1
5	Anmol Kaur	1802	13365	4116-16-116	58	24	82	44	21	65	52	23	75	53	24	77	45	22	67	34	13	47	34	13	47	57	24	81	Qualify	Qualify	464	58.00	2
6	Riya Soni	1801	13366	814-16-394	19	18	37	31	22	53	36	22	58	26	23	49	32	22	54	33	12	45	34	12	46	56	24	80	Qualify	Qualify	373	46.63	1
7	Harwinder Kaur	1803	13367	814-16-393	50	20	70	44	22	66	35	23	58	38	23	61	40	21	61	33	13	46	32	11	43	54	23	77	Qualify	Qualify	421	52.63	2
8	Gagandeep Kaur	1804	13368	814-16-400	17	14	31	32	22	54	41	21	62	26	22	48	41	22	63	32	11	43	32	12	44	54	24	78	Qualify	Qualify	375	46.88	1
9	Sarbjeet Kaur	1808	13369	814-16-402	28	9	37	29	21	50	42	20	62	16	22	38	26	22	48	32	11	43	32	11	43	47	21	68	Qual	Qual	351	43.88	1

																															if y	if y			
10	Sandeep Kaur	1810	13370	814-16-404	31	18	49	34	21	55	35	21	56	28	21	49	28	23	51	33	11	44	32	12	44	52	23	75	Qualify	Qualify	374	46.75	1
11	Sonalpreet Kaur	1812	13371	814-16-405	42	18	60	28	20	48	44	21	65	31	21	52	41	23	64	33	12	45	31	14	45	51	23	74	Qualify	Qualify	401	50.13	2
12	Kiran Preet Kaur	1811	13372	814-16-428	43	20	63	43	21	64	37	22	59	43	22	65	44	22	66	33	12	45	33	12	45	46	24	70	Qualify	Qualify	412	51.50	2
13	Sandeep Singh	1857	13373	814-16-423	35	9	44	42	21	63	29	20	49	12	21	33	36	21	57	32	11	43	31	10	41	38	22	60	Qualify	Qualify	357	44.63	1
14	Simranjeet Singh	1858	13374	814-16-412	33	9	42	28	21	49	26	20	46	10	22	32	26	21	47	32	11	43	30	11	41	45	20	65	Qualify	Qualify	333	41.63	1
15	Suraj Kumar	1853	13375	814-16-409	35	18	53	37	21	58	31	20	51	30	22	52	28	19	47	33	12	45	31	10	41	40	22	62	Qualify	Qualify	357	44.63	1
1	Deepi	185	13376	814-	3	2	59	4	2	62	3	2	58	3	2	51	4	2	6	3	1	4	3	1	4	4	2	6	Q	Q	402	50.2	2

6	nderpal Singh	1		16-422	9	0		1	1		5	3		0	1		0	2	2	4	3	7	1	4	5	7	2	9	ualify	ualify		5	
17	Harwinder Singh	1852	13377	814-16-410	0	14	14	26	20	46	32	22	54	13	21	34	33	23	56	33	12	45	30	13	43	45	22	67	Qualify	Qualify	325	40.63	1
18	Gurjant Singh	1854	13378	814-16-424	0	9	9		21	21		21	21		21	21		22	22		11	11		12	12		20	20	Qualify	Qualify	116	14.50	ABSENT IN EXAMS
19	Sher Singh	1855	13379	814-16-413	34	14	48	26	22	48	32	22	54	15	22	37	27	21	48	33	12	45	31	12	43	44	22	66	Qualify	Qualify	352	44.00	1
20	Amandeep Singh	1856	13380	814-16-408	30	9	39	26	22	48	35	22	57	2	21	23	28	19	47	32	12	44	30	12	42	40	20	60	Qualify	Qualify	337	42.13	1
				AVERAGE			**46.30**			**53.45**			**56.25**			**45.10**			**53.70**			**43.15**			**42.15**			**68.45**			51.06		

Average attainment of PO by direct method : **51.06 %.**

ATTAINMENT OF PO BY INDIRECT METHOD (EXIT SURVEY)

DEPARTMENT OF COMPUTER SCIENCE														
EXIT SURVEY														
PROGRAMME: BCA **SESSION - 2018-19**														
Pos & PSOs	SCALES					TOTAL RESPONDANTS	TOTAL MARKS FOR SCALES					**TOTAL MARKS**	**%AGE**	**LEVEL OF ATTAINMENT**
	1	2	3	4	5		1	2	3	4	5			
PO1		**2**	**4**	**12**	**2**	20	**0**	**4**	**12**	**48**	**10**	74	74.00	**3**
PO2			**5**	**11**	**4**	20	**0**	**0**	**15**	**44**	**20**	79	79.00	**3**
PO3		**1**		**6**	**13**	20	**0**	**2**	**0**	**24**	**65**	91	91.00	**3**
PO4		**1**	**3**	**11**	**5**	20	**0**	**2**	**9**	**44**	**25**	80	80.00	**3**
PO5			**7**	**9**	**4**	20	**0**	**0**	**21**	**36**	**20**	77	77.00	**3**
PO6			**5**	**9**	**6**	20	**0**	**0**	**15**	**36**	**30**	81	81.00	**3**

PO7		**1**	**6**	**8**	**5**	20	**0**	**2**	**18**	**32**	**25**	77	77.00	**3**
PO8			**4**	**9**	**7**	20	**0**	**0**	**12**	**36**	**35**	83	83.00	**3**
PO9		**1**	**2**	**6**	**11**	20	**0**	**2**	**6**	**24**	**55**	87	87.00	**3**
PO10		**2**	**4**	**12**	**2**	20	**0**	**4**	**12**	**48**	**10**	74	74.00	**3**
													80.3	

Average attainment of PO by indirect method: 80.3 %

Total PO attainment (%) = (weightage: 80 %) X (Average attainment in direct method) + (weightage: 20 %) X (Average attainment in indirect method)

= (80%) X 51.06 + (20%) X 80.3

= **56.9 %**

Level of Attainment = **Level 2**