MOHANLAL SUKHADIA UNIVERSITY, UDAIPUR
BACHELOR OF COMPUTER APPLICATION (BCA Annual Scheme)

Course of Study and Examination

(To be offered in affiliated colleges from session 2018-21)

1. **Duration of the Course:** The BCA (Annual Scheme) course will be of three years duration. Each year will be approximately 10 months (minimum 180 working days) duration.

2. **Medium of Instruction:** The medium of instruction and examination shall be English/Hindi.

3. **Eligibility:** The candidate must have passed 10+2 examinations with at least 50%marks in aggregate (Pass marks for SC/ST candidates or as per Govt. rules)

I Year (With effect from 2018-21)

Paper	Paper Name	Duration Of Exam(Hours)	Total
PAPER-I (BCA-101)	Introduction To Information Technology and PC Packages	3	100
PAPER –II (BCA-102)	Business Communication	3	100
PAPER-III (BCA-103)	Problem Solving through C Programming	3	100
PAPER-IV (BCA-104)	Basic Physics	3	100
PAPER-V (BCA-105)	Basic Mathematics	3	100
PAPER-VI (BCA-106)	Computer Organization	3	100
Practical-I (BCA-107)	PC Software Packages Lab	5	200
Practical-II (BCA-108)	C Programming Lab	5	200
1209	Environment Studies	3	100
1704	English	3	100
	Total		1200

II Year (With effect from 2019-21)

Paper	Paper Name	Duration Of Exam(Hours)	Total
PAPER-I (BCA-201)	Computer Communication and Networks	3	100
PAPER –II (BCA-202)	Database management System	3	100
PAPER-III (BCA-203)	Fundamentals of Operating System	3	100
PAPER-IV (BCA-204)	Data structure	3	100
PAPER-V (BCA-205)	System Analysis And Design	3	100
PAPER-VI (BCA-206)	Object Oriented Programming using C++	3	100
Practical-I (BCA-207)	Database management system Lab	5	200
Practical-II (BCA-208)	Data structures lab	5	200
1705	Hindi	3	100
	Total		1100

III Year (With effect from 2020-21)

Paper	Paper Name	Duration Of Exam(Hours)	Total
PAPER-I (BCA-301)	Java Programming	3	100
PAPER –II (BCA-302)	Information Systems	3	100
PAPER-III (BCA-303)	Cloud Computing	3	100
PAPER-IV (BCA-304)	Wireless and Mobile Computing	3	100
PAPER-V (BCA-305)	Web Technology	3	100
Practical-I (BCA-306)	Java Programming lab	5	200
Practical-II (BCA-307)	Web and Mobile Technology Lab	5	200
Practical-III (BCA-308)	Project	5	200
	Total		1100

5. Scheme of Instruction:

Each year shall be of ten months (180 working days) duration. Details of lecture hours per week shall be as follows:

Theory: Three hours/week for each Paper

Practical: Students are required to work in the Laboratory for 10 hours/week for each practical under four hours/week faculty guidance for each practical paper.

6. Examination Scheme:

1. University shall conduct examinations only after completion of 180 working days of instruction in a year.
2. Each theory paper shall be of 100 marks
3. Each practical paper shall be of 200 marks
4. The question paper shall consist total sixteen questions. Part-A shall consist of one compulsory question of 20 marks with ten parts covering the entire syllabus for which answer must be provided within 50 words for each. Part-B shall consisting ten questions covering 2 questions from each unit with internal choice and required to be answered in about 250 words (Each question in the part-B will carry 10 marks each.). Part-C contains five questions out of which two questions to be attempted in about 300 words. (Part–C will carry 15 marks each).
5. During examination students shall be provided with a single blank answer booklet and answers of all questions must be confined to the single answer booklet. No supplementary copies will be provided.
6. Question papers shall be set only in English. However, students can answer in English/Hindi

Project

Project evaluation shall be carry out as follows:

(i)	Project Report	:50 marks
(ii)	Presentation	:75 marks
(iii)	Work Assessment	:75 marks

Only the projects submitted by the candidates as per following guidelines will be evaluated.

1. The project must be of approximately 180 hours and so certified by the supervisor of the project.
2. The project must be submitted in the form in consonance with the format enclosed.
3. Project must be submitted before the prescribed last date.
4. Candidates are required to make a presentation of their project work during their project examination.
5. Examination of the project work will be conducted by a committee consisting of at least two internal examiners and one external examiner.

Minimum passing marks and classification of Successful Candidates:

I Year

a) The minimum marks for passing I year shall be 40% in each paper and 40% marks in the aggregate of papers.

b) A candidate may be promoted to II year if he has/ she secured at least 40% marks in at least six papers/practical out of 8 theory/practical papers and more than 40% in aggregate. Such candidate shall be required to appear in papers in which he has secured less than 40% marks along with papers of II year when these courses are offered again, so as to satisfy the passing criteria laid in I(a).

A candidate fails to satisfy the criteria I(a), I(b) for promotion to II year shall be required to rejoin the course in Ist year, if otherwise eligible in accordance with the University regulations laid in this regard.

II Year

a) The minimum marks for passing II year shall be 40% in each paper and 40% marks in the aggregate of papers.

b) A candidate may be promoted to III year if he has/ she secured at least 40% marks in at least six papers/practical's out of 8 theory/practical papers and more than 40% in aggregate. Such candidate shall be required to appear in papers in which he has secured less than 40% marks along with papers of III year when these courses are offered again, so as to satisfy the passing criteria laid in II(a)

c) A candidate fails to satisfy the criteria II(a), II(b) for promotion to III year shall be required to rejoin the course in II year, if otherwise eligible in accordance with the University regulations laid in this regard.

III Year

(a) The minimum marks for passing III year shall be 40% in each paper and 40% marks in the aggregate of papers.

(b) A candidate may be allowed to reappear in two papers of III year if he has/she secured at least 40% marks in at least six papers/practical's/project out of 8 theory/practical/project papers and more than 40% in aggregate. Such candidate shall be required to appear in papers in which he has secured less than 40% marks along with due papers of I & II year (if any) when these courses are offered again, so as to satisfy the passing criteria laid in III(a).

(c) A candidate fails to satisfy the criteria III(a), III(b) shall be required to rejoin the course in III year, if otherwise eligible in accordance with the University regulations laid in this regard.

No candidate shall be deemed to have satisfied examination requirement for the award of BCA degree unless he fulfills the criteria for passing I year, II year and III year examinations, as laid in I(a), II(a) and III(a).

Candidate will not be allowed to reappear in any papers of I, II & III year to improve the percentage.

At the end of final examination, the candidates eligible for the award of B.C.A. (Annual Scheme)

degree shall be classified on the basis to the marks obtained in the I,II & III year examinations, taken together, as follows:

(a) I division with distinction : 75% or more marks in the aggregate and provided the candidate has passed all the papers and examinations in the first attempt.

(b) I division : 60% or more marks but fails to satisfy the criteria for being classified as first division with distinction laid in (a).

(c) II division : 48% or more but less than 60%

(d) III division: 40% or more but less than 48%

A candidate must pass the examinations within five years of the initial admission to the first year of the course.

B.C.A. First Year
(Effective from session 2018-21)

BCA- 101: Introduction to Information Technology & PC Packages

UNIT-I

Computer Basics and its generations:
A Simple Model of a Computer, Characteristics and classification of Computers, Generations of Computers. Basic Applications of Computer; Components of Computer System, Central Processing Unit (CPU), VDU, Keyboard and Mouse, Other input/output Devices, Computer Memory organization and hierarchy, Concepts of Hardware and Software; Concept of Computing, Data and Information; Applications of ICT.

UNIT-II

Operating Systems:
History and Evolution, Main functions of OS, Multitasking,
Multiprocessing, Time Sharing, Real Time OS with Examples, DOS: Introduction, FAT, booting process, DOS system files, DOS commands- internal & external.

Windows Operating System: Introduction, versions, Features, Structure, Utilities, Installation of Hardware & Software, Using Scanner, System Tools, Communication, Sharing Information between computers and programs,

Linux:
Introduction, features, Shell, Kernel, basic commands

UNIT-III

Word Processing software:
Understanding Word Processing: Word Processing Basics; Opening and Closing of documents; Text creation and Manipulation; Formatting of text; Table handling; Spell check, language setting and thesaurus; Printing of word document, Mail Merge, Working with references and Review.

UNIT-IV

Using Spread Sheet and Presentations:
Basics of Spreadsheet: Manipulation of cells; Named Range, Conditional Formatting, Formulas and Functions; Graphs and Charts, Pivot tables, sorting, filters, advanced filters, What if analysis, Protecting sheet and workbook, Views.

Making Small Presentation: Basics of presentation software; Creating Presentation; Preparation and Presentation of Slides; Slide Show; Taking printouts of presentation / handouts.

UNIT- V

Introduction to Internet, WWW and Web Browsers:
Basic of Computer networks; LAN, WAN; Concept of Internet; Applications of Internet; connecting to internet; What is ISP; Knowing the Internet; Basics of internet connectivity related troubleshooting, World Wide Web; Web Browsing software's, Search Engines; Understanding URL; Domain name; IP Address; Using e-governance website, Communications and collaboration: Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration; Instant Messaging; Netiquettes.

Recommended Books

1. P .K. Sinha ,Fundamentals of Computers, BPB Publications
2. Fundamental of Computers By R. Thareja, Oxford University Press.
3. Introduction to Information Technology-ITL Education solutions limited, PEARSON.

BCA-102: Business Communication

UNIT I

Basic language skills and grammar: Phonetics and accent, Features of Indian English, Correction of sentences, structures, Tenses, ambiguity, Idiomatic distortions.

UNIT II

Theories of Communication: Importance of Communication, Communication, Process, Channels of communication, Significance of, Feedback, Barriers to Effective Communication, Ways to overcome the Barriers. Informal conversation Vs Formal expression Verbal and non-Verbal communication, barriers to effective communication, kinesics

UNIT III

Written communication: Differences between spoken and written communication, features of effective writing such as clarity brevity, appropriate tone clarity, balance etc. Précis Writing - expressing the presented ideas in concise and accurate manner

UNIT IV

Business Communication: Business and Technical report writing, types of reports, progress reports, routine reports, Annual reports, format, Analysis of sample reports from industry, Synopsis and thesis writing. Letter writing, format and style, effectiveness, promptness, Analysis of sample letters and emails collected from Business.

UNIT V

Vocabulary and English for businesses: Reading newspapers, business news, magazines to build vocabulary for the business communication. Reading Comprehension, Comprehending notices, advertisements, official documents, booklets, newspapers, instructional manuals and other documents.

Recommended Books

1 Bovee, Courtland, John Thill & Mukesh Chaturvedi. Business Communication Today: Dorling Kindersley, Delhi
2 Kaul, Asha: Business Communication: Prentice-Hall of India, Delhi
3 Monippally, Matthukutty M. Business Communication Strategies. Tata McGraw-Hill Publishing Company Ltd., New Delhi
4 Sharma, Sangeeta and Binod Mishra. Communication Skills for Engineers and Scientists: PHI Learning Pvt. Ltd., New Delhi
5 Essentials of Business Communication, Rajendra Pal, JS Korlahhi: Sultan Chand & Sons, New Delhi.
6 Advanced Communication Skills, V. Prasad, Atma Ram Publications, New Delhi.
7 Raymond V.Lesikav, John D. Pettit Jr.: Business Communication; Theory and Application, All India Traveller Bookseller, New Delhi 51
8 Business Communication, RK Madhukar, Vikas Pulishing House Pvt. Ltd.,
9 KR Lakshiminarayana: English for Technical Communication – vols. 1 and 2, SCITECH Publications (India) Pvt. Ltd., T.Nagar, Chenna 600 017
10 Edmund H weiss: Writing Remedies: Practival Exercises for Technical Writing. Universities Press, Hyderabad.

BCA 103: Problem Solving through C Programming

UNIT-I

Algorithm and algorithm development:
Definition and properties of algorithm, flow chart symbols, conversion of flow chart to language, example of simple algorithms, Introduction to program design, errors – syntax error, runtime error, logic error.

UNIT-II

Basics of C – Language:
Structure of C program, tokens, Data types, constants, operators and its precedence.

UNIT-III

Control Structure:
Decision Structure: - Simple if, if – else, if – else – if, nested if, switch case;
Loop Control Structure:- while , do while and for; Use of break, goto and continue.

UNIT-IV

Functions: Function definition, declaration and prototypes, Call by Value and Call by Reference, Recursion
Arrays and pointers: One Dimensional array, two dimensional arrays, array handling, passing arrays to functions, arrays and string handling, definition of pointers and its uses, pointer arithmetic

UNIT-V

Storage classes–auto, external, static, register;
Structures – declaring and accessing elements, array of structure,
File Handling - Input/output, Create, Open, Read, Write, Delete, Close;

Recommended Books

1. The C Programming Language, Brian Kernighan and Dennis Ritchie , PHI Publications.
2. Let us C, Yashavant Kanetkar, BPB Publications.
3. Programming in C , Balaguruswamy, McGraw Hill Education.

BCA – 104: Basic Physics

UNIT-I

Basic Concepts: Definition of Science, engineering and technology. Importance of Mathematics and Physics in ICT. Units and Dimensions, MKSA Units, Idea of order of magnitude scale of Mass, time and length with examples. Measurement of length using vernier caliper and screw gauge, Newton's laws of motion, physical quantities as scalars and vectors, vector addition, scalar and vector product of two vector, Brief idea of types of forces in nature, torque, rotational motion and moment of inertia, simple examples of conservation of energy, momentum and angular momentum.

Optical instruments: Electromagnetic spectrum, frequency, wavelength and energy associated with electromagnetic radiation, formation of image by lens, eye, Sensitivity of eye to electromagnetic radiation, defects of vision, Brief understanding of telescope, microscope and eye pieces.

UNIT-II

Electrostatics: Concept of Potential and field due to a charge, Gauss's law; dielectric constant, capacitance of a parallel plate condenser, energy stored in condenser, series and parallel combination of capacitances, types of capacitances used in electronic circuits, rating of capacitances.

Current Electricity: Electric current, Ohm's law, types of resistances and colour codes, Kirchhoff's laws, analysis of simple circuits, Thevenin, Norton and maximum power transfer theorems, principle of potentiometer, magnetic effect of current, field due to circular current loop.

UNIT-III

Transducers: Thermoelectric effect and thermocouples, thermistors, LDRs, piezo electric effect, speakers and mic electro chemical effect, primary and secondary cells, batteries. Electrical rating of cells and batteries

Interaction of magnetic field and current: for ce on current carrying conductor, moving coil galvanometer, conversion of galvanometer into ammeter and voltmeter, millimeter.

UNIT-IV

Electromagnetic induction: self and mutual inductances, chocks coil and transformers.

AC circuits: peak and rms voltage and current, power factor, L-R, C-R and L-C-R circuits with their phase diagrams, series and parallel resonant circuits.
AC &DC current, understanding electric power distribution in offices and houses, electrical safety, electric fuse, rating of electrical accessories. Importance of good earthing.

Semiconductors: Qualitative description of energy bands, metals, insulators and semiconductors, n and p types of semiconductors, semiconductor p-n junction, metal semiconductor junction, current voltage characteristics of pn junction diode, half wave and full wave rectifiers, Zener diode and voltage regulation, LEDs, photo diode, and solar cell.

UNIT-V

Transistors: Definition, Current in bipolar junction transistor, Amplifier: Brief idea of CE,CC amplifier and its charactersistics, gain indecibels,Frequency vs gain graph, cascading amplifiers, Oscillator: Brief idea about oscillators of different frequency range, Different types of wave forms. Brief introduction to Integrated circuits with scale of integration, Use of MOS and CMOS Transistors.

Lasers: Basic principle, He-Ne and semiconductor lasers, basic concepts of communication using optical fibers.
Brief idea of working and uses of Cathode ray Oscilloscope, Working principle of LCD and plasma devices, UPS, SMPS**.**

Recommended Books:

1 Physics, Part-I Kumar, Mittal; Nageen Publication, Meerut.
2 Concepts Of Physics, Part 1, H C Verma; Bharati Bhawan.
3 Concepts of Physics, Part2, H C Verma; Bharti Bhawam.

BCA 105: Basic Mathematics

UNIT-I

Sets & Relations : Sets and elements, Equal sets, Universal set & Empty set, Subsets, Venn diagrams, Basic operations on sets, Union & Intersection, Complements, Difference, Symmetric Difference, Fundamental Products, Algebra of sets and Duality, Finite Sets, Counting Principle, Classes of sets, Power sets, Partitions, Mathematical Induction, Cartesian Products of Sets, Relations, Pictorial representations of Relations, Composition of relations, Types of relations, Equivalence Relations, Partial ordering relations.

UNIT-II

Functions, Limit and Continuity : Functions, Kinds of Functions , Concept of real function, Domain and Range (simple cases), Composition Function, One-to-one, onto, into, invertible functions, Mathematical Functions , Exponential and Logarithmic Functions, Graph of functions (plotting of linear function, absolute value function, parabolic functions, Sin(x), Cos(x), tan(x), reciprocal function, e^x, log x, Signum function), Polar coordinates and graph, Limit of variable, Limit of function, Evaluation of
limits of various types of functions, Continuity & Discontinuity at a point, Continuity over an interval.
Trignometrical Functions: Definitions, proofs for any angle θ, signs of ratios, ratios of some standard angles.

UNIT-III

Quadratic Equation: Solution of Quadratic Equations, Nature of Roots.
Co-ordinates and Loci: Cartesian co-ordinate system, Introduction to Polar co- ordinates, distance between two points, section formulae, Area of triangle, Locus and its Equation.

Straight Line: Equation of straight line parallel to an Axis, slope form, intercept form, through two point condition of concurrency of three lines.
Matrices and Determinants : Definition and Types of Matrices, Addition , Subtraction and Multiplication of a Matrices, Scalar Multiplication, Transpose of Matrix, Determinants, Determinants of square matrix of order 1, 2 and 3, Area of a triangle, Solution of system of linear equations by Cramer's Rule, Minors and Cofactors , Adjoint of a Matrix, Inverse of a Matrix(up to order 3).

UNIT-IV

Differential Calculus: Derivative of a Function, Various Formulae-Product and Quotient Rule of Differentiation, Differentiation of Function of Function(chain rule), Trignometrical functions, Inverse Trignometrical functions, Exponential function, Logarithmic function, Implicit functions, Logarithmic Differentiation, Diffentiation of function w.r.t. another function, Higher Derivatives, Successive Differentiation, Liebnitz Theorem, Expansion of functions(up to 3 or 4 terms only) using Maclaurin's and Taylor's Theorem, Maxima and Minima (simple cases), Curve tracing (simple cases), Introduction to partial differentiation.

UNIT-V

Integral Calculus : Anti-Derivatives, Constant of integration, Indefinite integral, Elementary Integration Formulae, Methods of Integration, Integration by Substitution, Integration by parts, integration through partial fractions and rationalization, Concept of Definite integral, properties of definite integral, Integration of $\int_0^{\pi/2} \text{Sin}^n x \, \text{Cos}^m x$ using Gamma function. Area of Bounded Region, Circle, Parabola, Ellipse in standard form between two ordinates and x- axis.

Recommended Books

1. Discrete Mathematics . Schaum'sOutlines
2. Differential Calculus By Shanti Narayan,P.K.Mittal
3. Integral Calculus By Shanti Narayan,P.K.Mittal
4. Elementary Calculus By Gokhroo & Bhargav.
5. Business Mathematics By Quaji Zameeruddin, V.K.Khanna,S.K.Bhambri
6. Comprehensive Mathematics Class XII Part-A By ParmanandGupta

BCA 106: Computer Organization

UNIT-I

Logic families: TTL, ECL, CMOS Gates, Boolean Algebra, Minimization of Boolean Functions, Flip-flops, Combinational circuits, Sequential circuits.

Representation of Integers : Octal, Hexadecimal, Decimal, and Binary, 2's complement and 1's complement arithmetic, floating point representation.

UNIT-II

Building blocks of computer system: Basic building blocks – I/O, Memory, ALU and its components, Control Unit and its functions, Instruction –word, Instruction and Execution cycle, branch, skip, jump and shift instruction, Operation of control registers; Controlling of arithmetic operations;

UNIT-III

Addressing techniques and registers: Addressing techniques – Direct, Indirect, Immediate, Relative, Indexed addressing and paging. Registers – Indexed, General purpose, Special purpose, overflow, carry, shift, scratch, Memory Buffer register; accumulators; stack pointers; floating point; status information and buffer registers.

UNIT-IV

Memory: Main memory, RAM, static and dynamic, ROM, EPROM, EEPROM, EAROM, Cache and Virtual memory.

UNIT- V

Interconnecting System components:

Buses, Interfacing buses, Bus formats – address, data and control, Interfacing keyboard, display, auxiliary storage devices and printers. I/O cards in personal computers.

Introduction to Microprocessors and Microcontrollers: introduction to 8085 microprocessor, examples of few instructions to understand addressing techniques. Difference between microprocessor and microcontrollers.

Recommended Books

1. Andrew S. Tanenbaum , Structured Computer Organization, Printice Hall
2. William Stallings, Computer Organization and Architecture , Sixth Edition, Pearson.
3. Digital Design and Computer Organization M. Morris Mano, Pearson Education

BCA 107: Practical I: PC Packages and microprocessor lab

Experiments based on papers BCA 101 and BCA 106.

BCA 108: Practical II

C Programming Lab. Experiments based on paper BCA 103

BCA PAPER 1209
Environmental Studies

Compulsory paper for all streams at UG level

UNIT I

The Multi disciplinary nature of environmental studies and natural resources.
Definition, Scope and importance, Need for public awareness .

a) Renewable and nonrenewable resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
c)Mineral Resources : Use and exploitation, environmental effects of extracting and using minerals resources, case studies.
d)Food Resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
e)Energy resources : Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources, Case studies.
f)Land Resources: Land as a resource, Land degradation, man induced landslides, soil erosion and desertification.
Role of an individual in conservation of natural resources
Equitable use of resources for sustainable lifestyles.

UNIT II

Ecosystem
Concept. of an ecosystem
Structure and function of an ecosystem
Producers, consumers and decomposers.
Energy flow in the ecosystem.
Ecological succession.
Food Chains, food webs and ecological pyramids.
Introduction, types, characteristic features, structure and function of the following ecosystem:-
a Forest ecosystem b. Grassland ecosystem c. Desert ecosystem d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans estuaries).

UNIT-III

Biodiversity and its Conservation
Introduction- Definition: genetic, species and ecosystem diversity .
Biogeographical classification of India.
Value of biodiversity: consumptive use, productive use, social ethical, aesthetic and option values.
Biodiversity at global, national and local levels.
India as mega -diversity nation
Hot -spots of biodiversity
Threats of biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts.
Endangered and endemic species of India.
Conservation of bio-diversity : In-situ and Ex-situ conservation of bio-diversity

UNIT-IV

Environmental Pollution

Definition

Causes, effects and control measures of :-

a. Air Pollution; b. Water Pollution; c. Soil pollution; d. Marine pollution; e. Noise pollution f. Thermal Pollution g. Nuclear Hazards

Solid Waste Management : Causes, effects and control measures of urban and industrial wastes.

Role of an individual in prevention of pollution.

Pollution case studies.

Disaster management : floods, earthquake, cyclone and landslides.

UNIT-V

Social Issues and the Environment

- - From Unsustainable to sustainable development. :
- - Urban problems related to energy.
- Water conservation. rain water harvesting, watershed management.
- Resettlement and rehabilitation of people; its problem and concerns, Case studies.
- Environmental Ethics : Issues and possible solutions.
- Climatic change, global warming, acid rain; ozone layer, depletion, nuclear accidents and holocaust ,Case studies.
- Wasteland reclamation.
- Consumerism and waste products.
- Environment Protection Act. ,
- Air (Prevention and Control of Pollution) Act.
- Water (Prevention and Control of Pollution) Act.
- Wildlife Protection Act.
- Forest Conservation Act.
- Issues involved in enforcement of environment legislation..
- Public Awareness.
- Population explosion- Family Welfare Program.
- Environment and Human Health.
- Human Rights.
- Value Education
- HIV/AIDS
- Women and Child Welfare
- Role of Information Technology in Environment and Human Health.
- Case Studies.

Field Work (For Field experience and Training only.)

- Visit to all local area to document environmental assets- river/forest/grassland/hill/mountain.
- Visit to a local polluted site - Urban/Rural/Industrial/Agricultural
- Study of common plants, insects, birds.
- Study of Simple, ecosystems-pond, river, hill slopes, etc.

BCA PAPER 1704
GENERAL ENGLISH

Common for Science, Social Sciences and Humanities & Commerce Faculties)

(1) Texts:

The Many Worlds of Literature Edited by Jasbir Jain, Macmillan; India.

George Orwell : *Animal Farm*

Or

R.K. Narayan : *A Vendor of Sweets*

Distribution of marks:

(1) Current English for Language skills:

(a) Short- answer questions (5 out of 10)
Each carrying 1 mark =

(b) General questions (2 out of 4)
Each carrying 4 mark =

(c) Questions on vocabulary =

(2) *Animal Farm* or *A Vendor of Sweets*:

(a) Two questions out of 4
Each question carrying 5 marks =

(2) Grammar

Tenses

Modal Auxiliaries
Phrasal Verbs
Clause (Nominal, Adjectival, Adverbial)
Use of Non-finite verbs (Gerunds, Participles, and infinitives)

(3) Comprehension and Composition

Précis writing

Essay (about 300 words)
on one topic out of four topics

Books Recommended

1. An Intermediate English Grammar, Pit Corder
2. A Practical English Grammar, Thompson and Martinet, (ELBS- Oxford University Press)