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Department of English

Compulsory English (B.A. B.Sc. B.Com. I II III)

English language is an under graduate foundation courses in B.A. B.Sc. B.Com I II III mode. Its effective usage in over all skills. English language courses includes proficiency in grammar and its effective usage in speaking and writing. It further helps them to prepare for various competitive exams and to keep up with the increasing demand for English. Enhance language through a task based and learner centric syllabus carry out all the LSRW skills.

Course Outcomes (CO) of the Courses common to all the UG Program mentioned above

Course: Foundation Course English Language

CO-1 The students gain ample practice in writing skills. They will be able to write a paragraph with a topic sentence support and concluding sentence.

CO-2 The students will be able to use grammatical structures accurately. They are also exposed to different literary genres of prose and poetry.

CO-3 The student will be able to produce appropriate vocabulary and correct words form.

CO-4 The Students will be able to broaden their vocabularies and develop on appreciation of language.

CO-5 The students will be able to competent to write a report or idea expansion.

CO-6 The students will be able to summarize and paraphrase information in a text and the text focuses on readability, reachability and testability.

हिन्दी – विभाग

Programme Outcome - हिन्दी भाषा (स्नातक स्तर)

- 1. हिन्दी भाषा का बोध कराना।
- 2. हिन्दी भाषा का अनुप्रयोग करना।
- 3. हिन्दी भाषा कौशल को व्यवहारिक रुप में प्रयोग में लाना।
- हिन्दी व्याकरण के ज्ञान का बोध कराना।
- 5. हिन्दी भाषा के मानक स्वरुप के व्यवहारिक रुप से परिचित कराना।
- 6. सामान्य हिन्दी भाषा में पत्राचार, आलेख के विभिन्न स्वरुपों का ज्ञान कराना।
- 7. हिन्दी के व्यवहारिक स्वरुप से परिचित कराना।

Specific Outcome :- हिन्दी भाषा (स्नातक स्तर) :--

- 1. विद्यार्थियों में हिन्दी भाषा के प्रति जागरुकता आयेगी ।
- 2. भाषा प्रचार-प्रसार में अभिवृद्धि होगी।
- 3. हिन्दी का व्यवहारिक अनुप्रयोग में वृद्धि होगी।
- 4. इससे विद्यार्थी विभिन्न प्रतियोगी परीक्षाओं में हिन्दी के ज्ञान एवं कौशल का प्रयोग कर सकेंगें।
- 5. समाज में हिन्दी के मानक स्वरुप का व्यवहारिक पक्ष दिखाई देने लगेंगा।
- 6. भाषा के सांस्कृतिक अवदान में अभिवृद्धि हो सकेगी।

Programme Outcome - हिन्दी साहित्य (स्नातक स्तर) :--

- 1. हिन्दी साहित्य की उत्पत्ति एवं विकास से परिचित कराना।
- 2. हिन्दी साहित्य के इतिहास पर विस्तृत प्रकाश डालना।
- 3. हिन्दी साहित्यकारों, रचनाकारो के योगदान से परिचित कराना।
- 4. हिन्दी साहित्य को समृद्ध करने में विभिन्न काल की भूमिका का विश्लेषण कराना।

Specific Outcome :-- हिन्दी साहित्य (स्नातक स्तर) :-- :--

- 1. विद्यार्थियों में साहित्य के प्रति रुचि में अभिवृद्धि हो सकेगी।
- 2. विद्यार्थीयों में साहित्य के महत्व एवं उपयोगिता को प्रचार प्रसार मिल सकेंगा।
- 3. साहित्य के सहारे समाज को देखने की दृष्टि का विकास हो सकेगा।
- विभिन्न विषयों के प्रति अपनी राय या विचार अभिव्यक्ति करने की क्षमता का विकास हो सकेंगा।
- 5. विद्यार्थियों में रचनात्मक, सृजनात्मक कौशल विकास हो सकेगा।

Programme Outcome - M.A. Hindi :-- (स्नातकोत्तर स्तर)

- 1. हिन्दी साहित्य के इतिहास, काल विभाजन, नामकरण का परिचय कराना।
- 2. हिन्दी के विविध स्वरुपों से परिचित कराना।
- 3. भाष विज्ञान के सैधांतिक पक्ष से अवगत कराना।
- 4. प्राचीन, मध्यकाल एवं आधुनिक कवि/लेखक आचार्य से परिचित कराना।
- 5. गद्य एवं पद्य साहित्य के स्वरुप से परिचित कराना।
- 6. पाश्चात्य एवं भारतीय साहित्य से परिचित कराना।
- 7. हिन्दी के व्यवहारिक पक्ष से परिचित कराना।

Specific Outcome - M.A. Hindi :-- (स्नातकोत्तर स्तर):--

- 1. छात्रों में भाषा एवं साहित्य के प्रति रचनात्मक दृष्टि का विकास करना।
- 2. छात्रों में हिन्दी के प्रति रोजगार परख दृष्टि का विकास हो सकेगा।
- 3. छात्रों में पत्रकारिता एवं विज्ञापनों संबधी दृष्टि का विकास हो सकेगा।
- 4. लोक साहित्य की दृष्टि का विकास हो सकेगा।
- 5. छात्रों में शोध परख दृष्टि का विकास हो सकेंगा।

एम.ए. हिन्दी प्रथम सेम.

1. हिन्दी साहित्य का इतिहास (आदिकाल एवं पूर्व मध्याकाल) –

Course Outcome :-

- 1. साहित्य लेखन की परम्परा से परिचित कराना।
- 2. साहित्य इतिहास के काल विभाजन, नामकरण से परिचित।
- 3. प्राचीन साहित्यक ऐतिहासिक प्रवृतियों से परिचित कराना।
- भक्तिकाल, विभिन्न काव्यधाराओ, परंपराओं का बोध कराना।

2. प्रचीन एवं मध्यकालीन काव्य —

- कबीर के कृतित्व एवं व्यक्तित्व से परिचित कराना। 1.
- मलिक मोहमद जायसी के पदमावत के माध्यम से सूफी काव्य परंपरा की जानकारी प्रदान करना। 2.

- 3.
- प्राचीन काव्य परंपरा में पृथ्वीराज रासो के महत्व से परिचित कराना।
- मीरा, रहिम, रैदास, रसखान का कृतित्व एवं व्यक्तित्व से परिचित कराना। 4.

- 3. आधुनिक काव्य –

Course Outcome :-

- 1. आधुनिक काव्य धारा से परिचित कराना।
- 2. द्विवेदी युग , छायावादी युग एवं छायावादोत्तर के काव्य धारा से परिचित कराना।
- 3. आधुनिक युग के प्रमुख प्रतिनिधि कवियों के कृतित्व एवं व्यक्तित्व से परिचित कराना।

4. आधुनिक गद्य साहित्य—

Course Outcome :-

- 1. आधुनिक गद्य विधाओं से परिचय कराना ।
- 2. नाटक, एकांकी, आत्मकथा आदि के कथा तत्वो से बोध कराना।
- विद्यार्थियों में सृजनात्मक, रचनात्मक कौशल का विकास करना।

एम.ए. हिन्दी द्वितीय सेम.

1. उत्तर मध्यकाल से आधूनिक काल तक –

Course Outcome :-

- 1. रीतिकाल की पृष्टभूमि, धाराये., प्रतिनिधि कवि,रचनाओं से परिचित कराना।
- 2. आधुनिक काल की पृष्ठभूमि से परिचित कराना।
- 3. द्विवेदीयुग, छायावाद, छायावादोत्तर काल के विभिन्न वाद, प्रतिनिधि कवियों का सामान्य परिचय कराना।
- 4. गद्य एवं पद्य साहित्य के प्रति विद्यार्थियों में जागरुकता लाना एवं कौशल में अभिवृद्धि कराना।

2. मध्यकालीन काव्य —

Course Outcome :-

1. सूरदास के व्यक्तित्व, कृतित्व से परिचित कराना।

- 2. तुलसी के व्यक्तित्व, कृतित्व से परिचित कराना।
- 3. बिहारी के व्यक्तित्व, कृतित्व से परिचित कराना।
- प्राचीन साहित्य के प्रति विद्यार्थियों में रचनात्मक कौशल के विकास में वृद्वि कराना एवं उसके महत्व एवं उपयोगिता से परिचित कराना।
- 3. आधुनिक काव्य 2

Course Outcome :-

- 1. आधुनिक काव्य (प्रगतिवाद, प्रयोगवाद, नई कविता) के संदर्भ में काव्य प्रवृतियों से परिचित कराना।
- 2. काव्य दृष्टि के विकास कम के प्रति समझ विकसित कराना ।
- 3. समय के सापेक्ष साहित्य में बदलाव के प्रति समझ विकसित कराना।
- 4. आधुनिक गद्य साहित्य (उपन्यास, निबंध कहानी) –

Course Outcome :-

- 1. गद्य की विविध विधाओं का ज्ञान कराना।
- 2. कथातत्वों के आधार पर अलग–अलग विधाओं का विश्लेषण का ज्ञान कराना।
- 3. विश्लेषण परख या तर्क संगत कौशल में अभिवृद्धि कराना।

एम.ए. हिन्दी तृतीय सेम.

1. साहित्य के सिद्धांत तथा आलोचना शास्त्र –

Course Outcome :-

- 1. भारतीय काव्य शास्त्र की अवधारणा एवं प्रयोजन से परिचित कराना।
- 2. भारतीय सिद्धांत के विश्लेषण से परिचित कराना।
- 3. पाश्चात्य परंपरा एवं सिद्धांत से परिचित कराना।
- 4. विद्यार्थियों में भारतीय, पाश्चात्य पंरपरा के तुलनात्मक अध्ययन के कौशल को विकसित कराना
- 2. भाषा विज्ञान –

- 1. हिन्दी भाषा एवं भाषा विज्ञान की अवधारणा के प्रति समझ विकसित कराना।
- 2. स्वन (ध्वनि), व्याकरण, अर्थ विज्ञान की अवधारणा से परिचित कराना।
- 3. भाषा के प्रति वैज्ञानिक दृष्टिकोण को विकसित कराना।
- 3. कामकाजी हिन्दी एवं पत्रकारिता –

Course Outcome :-

- 1. हिन्दी के व्यवहारिक स्वरुप का बोध कराना।
- 2. आधुनिक युग में कम्प्यूटर में हिन्दी के अनुप्रयोग से परिचित कराना।
- 3. पत्रकारिता के संदर्भ में विद्यार्थियों में पत्रकारिता के गुण का विकास कराना।

4. भारतीय साहित्य –

Course Outcome :-

- 1. भारतीय साहित्य की पृष्ठभूमि, महत्व एवं उपयोगिता से परिचित कराना।
- 2. विभिन्न भारतीय क्षेत्रों में साहित्य के अध्ययन एवं प्रभाव से परिचित कराना।
- 3. हिन्दी अभाषी क्षेत्रों में हिन्दी के प्रचार प्रसार के प्रति जागरुकता का विकास कराना।

एम.ए. हिन्दी चतुर्थ सेम.

1. हिन्दी आलोचना तथा समीक्षा –

Course Outcome :-

- 1. भारतीय आचार्यो के काव्य शास्त्रीय चिुतन परंपरा से परिचित कराना।
- 2. हिन्दी आलोचना एवं विकास सहित प्रमुख प्रवृतियों से परिचित कराना।
- 3. विद्यार्थियों में स्व–विवेक के अनुसार काव्य की समीक्षा के प्रति सक्षम बनाना।

2. हिन्दी भाषा —

- 1. हिन्दी भाषा के उद्भव विकास से परिचित कराना।
- 2. भाषा विस्तार के प्रति समझ विकसित कराना।
- 3. भाषा स्वरुप एवं यांत्रिक स्वरुप से परिचित कराना

3. मीडिया लेखन एवं अनुवाद –

Course Outcome :-

- 1. विद्यार्थियों में मीडिया लेखन के प्रति जागरुकता या विकास कराना।
- 2. अनुवाद व्यवहार एवं सिद्धांत से परिचित कराना।
- 3. व्यवहारिक अनुवाद, पत्राचार से विद्यार्थियों में कौशल लेखक का विकास कराना।

4. जनपदीय भाषा और साहित्य (छत्तीसगढ़ी) -

- 1. छत्तीसगढ़ी साहित्य से परिचित कराना।
- 2. छत्तीसगढ़ी भाषा एवं व्याकरण के ज्ञान से परिचित कराना।
- 3. विभिन्न साहित्यकारो, रचनाओं के माध्यम से विद्यार्थियों में रचनात्मक प्रतिभा को विकसित कराना।

Department Of Political Science

Program outcomes: B.A. Political Science

Program out comes B.A. Political Science after completion of B.A. Program students will be able to increase their understanding of basic facts and concepts about the Indian politics system including its history constitutional and legal foundations leading political values and Ideas governing institutions and policy making processes.

Course : political Theory

On completion of B.A. political science course students will be able to

CO1 – Understand Politics as a specific human behavior power Authority and influence.

CO2 – Evaluate various theories of the origin of the State.

CO3 – Understand the theories of Rights, Duties, Liberty, Equality in Democracy.

CO4 – Know the dictatorship Government and different kind of constitution.

CO5 – Analyze the party system pressure group and social change

Course : Indian Government and Politics

CO – 1 The students after the completion of this course will be able to contemplate and comprehend and recognize the nature methods and significance of political thought.

CO – 2 Recognize and appreciate various social and political thinkers.

CO – 3 Critically evaluation the Indian party system Election Commission and Election reforms national parties.

CO – 4 Evaluating the major issues of Indian politics past religion and Panchayti Raj system.

Course : Political Thought

CO – 1 To understand the Plato: Ideal state Justice, Education, Communism, Philosopher king.

CO – 2 Providing an insight into the dominant features of western Political Thought : Plato, Aristotle, Machiavelli, Hobbes, Locke, Rousseau and Marx.

CO – 3 Analyzing Marx's concept of freedom and democracy : Nature Features and critiques.

CO – 4 Analyzing the nationalist thought of Ambedkar.

CO – 5 Discussing the nationalist of Gandhi : Truth, Nonviolence, Satyagrah and Political thoughts.

Course : Comparative Government and Politics

CO – 1 The students will be able to contemplate and comprehend and recognize and critically assess presidential and parliamentary system.

CO – 2 Getting information about the system of the British Constitution: Evolution, Salient features. Executive and Legislature judiciary.

CO – 3 Knowing about the Constitution of U.S.A.: Salient Features, Executive, Legislature and judiciary.

CO – 4 Exploring the Constitution of china: Salient Feature, Executive, Legislature and judiciary communist party.

CO – 5 Making a comparative analysis of the institution of UK, USA, China and Switzerland.

Course : International Politics

CO – 1 Explaining scope and subject matter of International Relations as an autonomous academic discipline.

CO – 2 Study of the relation of India with neighboring countries.

CO – 3 Student enable to analyze importance of international relation in process of nation progress.

CO – 4 Student enable to understand the foreign Policy of India: Determinating elements, characteristics Non-Alignment : meaning, relevance.

Course : Public Administration

CO-1 Explaining the nature, scope and evolution of Public Administration: Private and Public.

CO-2 Discussing making of public policy making and method of Implementation.

CO-3 Analyzing the major concepts in Public administration.

CO-4 Bureaucracy and Budget process new dimensions of public administration in the age of Globalization and Liberalization.

CO-5 Analyzing the civil Service in India.

Course Outcome – Geography

Course 01: Physical Geography - Elements of Geomorphology

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the effect of rotation and revolution the earth.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the interior structure of the earth.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize theory regarding of origin of continents and oceans.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the formation of rocks.

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize the work of internal and external forces and their associated land forms.

Course 02: Introduction to Geography and Human Geography

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the relationship of man and environment.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the races of man kinds.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the modes of life of pigmy, Bushman, Eskimos, Masai, Gond and Nagar.

Course 03: Physical Geography - Climatology and Oceanography

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the weather and climate.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the atmospheric moisture.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the air masses and fronts.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the surface configuration of the ocean floor.

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize the circulation of oceanic water.

CO6. The students after the completion of this course will be able to contemplate and comprehend and recognize the marine deposits, coral reefs.

Course 04: Regional Geography with Special Reference to North America

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the regional concept, bases of regionalization.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the structure, relief, climate and soils of North America.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the mineral and energy resources, Forests and North America.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the Agriculture belts, line stock and dairy forming in North America.

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize the Industries and Regions of North America.

Course 05: Geography - Resources and Environment

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the resources: meaning, nature and components.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the distribution and utilization of resources.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the man environment interrelations.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the environmental conservation and management.

Course 06: Geography of India (with special reference to Chhattisgarh)

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the geo-physical features of India.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize the drainage, climate of India.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize the resources, geo-cultural features of India.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize the geo-physical features, geo-cultural features of Chhattisgarh.

Program Outcome and Course Outcome

B.A. Economic

Programme Outcome

By completion of the program, the students will able to understand the basic concepts, fundamental Principles related to economics and their relevance in the day to day life.

• Economics is the study of how societies, Government, beeriness, hawseholes and individuals allocate their scarce resources.

• Economics is the study of how people decide to are resources on an indindual and a collective basic.

• The studies of economics can also pronde valuable knowledge for making decisions in everyday life.

• Realised that knowledge of economics in other human writies can have greatly and effectively influence which instrirets in evowing new theories.

Course Outcome

B.A. I :- MICRO ECONOMICS

After successful completion of the course, the students will be able to-

- Understand the fundamentals of micro economics.
- Understand the economics, nature and scope methodology.
- Production decision and function law of retunes, different concept of cost equilibrium of the firms.
- Student understands market structure study.
- Get an introduction to supply and demand and the basic forces that determine equilibrium in a market economy.
- Some of major concepts that economics taught students which are very important in distribution, wages, rent, interest, profit theories and welfare economics.

INDIAN ECONOMY

After successful completion of the course, the students will be able to-

- They know the development process in pre and past independent Indian economy.
- Understand the problems and measures in their contextual perspective.
- The student is able to know how to solve the problem and solution of agriculture in India how to make efficient use of natural resources.

B.A.II:- MACRO ECONOMICS

- Using employment and national income statistics students will be able to Describe and analyze the economy in quantitative terms.
- The students will be able to understand the meaning, objective and functions of IMF, World Bank and WTO.
- Outline the role of comparative advantage in exchange and describe the role of International trade and finance in domestic economic activity.

B.A.II:- Money, Banking & Public Finance

- To know what are the causes of inflation and deflation.
- What tools Central Bank have and how does monetary policy affect the economy.
- To demonstrate the meaning and function of money.
- Identify types of banks; understand the sanrees of finance both public and private.
- Understand the meaning and scope of public finance public expenditure, public Revenue, public debt and their theories and Financial Administration.

B.A.III

Development and Environmental Economics

The Student will be able to understand:-

- To enable the student to understand the theories and strategies of growth and development.
- To impart knowledge about the issues relating to sustainable development, Environment Protection and Pollution control measures.
- Understand the concept of Intellectual Capital, efficiency and productivity in agriculture, the choice of techniques and the role of monetary and fiscal policy in developing countries.

Statistical Methods

- Student will be able to know what statistics are, their features and their usefulness.
- Acquire knowledge about the methods of measuring central tendency.
- Understand the meaning and methods of measuring dispersion.
- Student should understand the various methods of correlation and correlation coefficient.
- Understand the usefulness of index, construction of index and different methods of index construction.

Programme Outcome (Sociology)

Upon successful completion of the programme the graduate students would be able to:-

Understand basic concepts and theortical perspectives in sociology and how they are used int sociological explanation of social behavior. Understand how to collect analyze and interpret empirical evidence in sociological research Gain familiarity with and develop an understanding of core substantive areas of sociological inquiry

Course Outcome

UG (Sociology) Programme

Sociology:- Introduction to Sociology contemporary Indian Society Sociology of Tribal Society Crime and society Sociology of Tribal Society Methods of Social Research

B.A. I Sociology

Introduction to Sociology

- 1. Student develop sociology as an Independent Subject of inquiry.
- 2. Insight into basic concepts of sociology and social processes.
- 3. You will also get to know about the utility of sociology and social ecology.
- 4. Culture socialization Individual and society. Social coltral Norms and values Information.
- 5. Meaning and pattern, Types, Factory, evolution and progress.

II (Contemporary Indian Society)

- 1. In this paper students will value into the basic depth of Indian society.
- 2. They will understand about ancient concepts like varna system, ashrlm system.
- 3. Will understand about the cultural diversity prevaleut in India, different religions.
- 4. Will also understand about social institutions related to tribes.
- We will understand about Indian social event through the process of globalization, liberalization etc. and some social issues and problems of C.G. state.

B.A.2nd Year

(Sociology of Tribal society)

- 1. Tribal society is one of the important components of Indian society.
- 2. To make the students aware of the concept, classification culture beliefs, religion, institutions, customs as well as social problems.
- 3. The prevailing changes and dynamics among the tribes reveal about the tribal societies.
- 4. Tribal society is also popular with many movements.
- 5. Will also think about some important tribal communities of Chhattisgarh.

ll paper

(Social and Crime)

- 1. This paper will develop on understanding of the concepts of crime, law and criminal Justice system.
- 2. Students will be able to understand crime rates, patterns and types of crime and punishment.
- 3. They will also learn about social disorganization and reform process.
- 4. Understand the rate of police and Judiciary in India.
- 5. Evolution of prison Reforms in India and modern Correctional concepts like probation, parole.

B.A.III- I Paper

(Foundation of Sociological thought)

- 1. Student will be able to understand the precursors of the evolution and emergence of sociology.
- 2. August Cawte, Carl marx, A wiil durkhim max weber, pareto etc. will know some of his important classical theories.
- 3. Student will be able to gain knowledge about hostel.
- 4. Will understand about the theory of class development. The theory of social change.
- 5. Knouring the concepts of value.

Paper-II

(Methods of social research)

- 1. Student will understand the meaning scope and importance of social research.
- 2. Understand the scientific method and its logic gain Knowledge.
- 3. Understand the basic features of question naire and the process of making.
- 4. Develop an understanding of the usefulness and demerits of schedule.
- 5. Will try to understand the suggestion for preparing the report.

Department of Botany

B.Sc. Botany

Programme outcome

After awarding degree of Bachelor- B. Sc. With Botany students will be able to –

PO1- Full of scientific temperament.

PO2- See the thing in a scientific way.

PO3- Perform practical work.

PO4- Deal with the topics related to biochemistry, biotechnology, plant tissue culture, and microorganism.

PO5- Discuss & comparison on lower plants to higher plant, Cryptogams and phanerogams.

PO6- Explain morphological characters, Anatomical character of a plant.

PO7- Explain physiological response of plant.

Programme Specific outcomes

PSO1- Explain the functioning, utilization and important of a plant in their surroundings.

PSO2- Clarify the systemic of plant according to morphological characteristics.

PSO3- Explain the experimental demonstration of plants to the others.

PSO4- Understand the developmental biology.

PSO5- They will be able to discuss on lower plants, Cryptogams and phanerogams.

PSO6- Explain morphological characters, Anatomical character of a plant.

PSO7- Clarity difference between divisions of plant kingdom.

PSO8- Explain the concept of biotechnology, genetic, engineering, gene mapping and Tissue culture.

PSO9- Understand concepts of Biomolecules, Biochemistry and physiology of plants.

<u>Course outcome</u>

<u>B. Sc. I (A)</u>

Bacteria, Viruses, Fungi, Lichens and AlgaI

CO1- The student after the completion of this course will be able to the describe general features, structures, types, reproduction and economic importance of Virus, Virusoids, Prions, Cynophage & Mycorrhiza.

CO2- The student after the completion of this course will be able to the describe general characteristic and classification fine structure of bacterial cell, gram positive and negative bacteria. Mode of nutrition and reproduction , economic importance, microbial biotechnology, rhizobium, azatobactor, anabena.

CO3- The student after the completion of this course will be able to the understand and describe habit, habited, structure, cellular composition, nutrition, reproduction of fungi and their association.

CO4- The student after the completion of this course will be able to the understand and describe habit, habited, thallus organization, structure, cellular composition, nutrition, reproduction of algae and their association.

CO5- The student after the completion of this course will be able to the general account, types, structure, nutrition, reproduction, economic importance, mycoplasma and cyanobacteria.

They shall be able to explain the value of Lichens and mushroom biotechnology.

<u>B. Sc. I (B)</u> Bryophytes, Pteridophytes, Gymnosperm and Palaeobotany

CO-1 To identify the characteristics, affinities, range of thallus organization, classification, reproduction, ecological and economical importance of Bryophytes.

CO-2 To identify the characteristics, affinities, economics importance and classification, Heterospory and seed habit, steller system in pteridophytes. Apospory, apogamy and telome theory.

CO-3 Students shall be able to explain the systematic position, accurance, morphology, anatomy and reproduction structure of psilotum, lycopodium, seleginella, equstum, marsilea.

CO-4 Students shall be able to explain the general characteristics, affinities, economic importance and classification, morphology, anatomy and reproduction in cycus, pinus, ephedra.

CO-5 Students shall be able to understand the use of fossil to study the plant as well as importance of geological time scale.

<u>B. Sc. II (A)</u> <u>Plant Taxonomy, Economic, Botany Plant Anatomy And Embryology</u>

CO-1 The student after the completion of this course will be able to understand the classification of the system proposed by benthum Hooker and understand the Bionomical Nomenclature and ICUN. They shall be able to understand the classification of the numerical taxonomy, Chemotaxomy, Herberium techniques, Botanical garden.

CO-2 The student after the completion of this course will be able to describe, diversity of flowering plants systematic position. distingunshing characters and economic importance of the angiosperms families.

CO-3 They shall be able to understand the Botanical Name, Family, part used of the following economically important plant fiber and timber yielding plant, fruit plant, medicinal and spices plant . Cultivation of important flower, fruit plant and beverages.

CO-4 They shall be able to understand the Root and shoot apical meristems, theory of root and shoot apex organization, permanent tissue anatomy of root, stem, leaf of dicot and monocot, and secondary growth.

CO-5 Student shall be able to understand and describe Embryology in flower as a reproductive organ, anther microsporogenesis development of male and female gametophyte pollination, mechanism self-incompatibility fertilization. Endosperm, Embryo polyembryony apomixes and partheno carpy.

<u>B. Sc. II (B)</u> Ecology and Plant Physiology

CO-1 Student shall be able to understand the Introduction and scope of ecology factors, soil formation and soil profile, morphology and anatomical adaptive in hydrophytes, Xerophytes and Epiphytes.

CO-2 Student shall be able to explain the population and community characteristics of ecosystem and ecological succession and Biogeochemical Cycles.

CO-3 Student shall be able to explain the physiological process of plant and relationship of plant to water, soil, and organic substances.

CO-4 Student shall be able to explain the photosynthesis and Respiration process.

CO-5 They shall be able to deal with plant growth hormones, growth and development process of plant.

<u>B. Sc. III (A)</u> <u>Plant Physiology, Biochemistry, and Biotechnology</u>

CO-1 The student after completion of this course will be able to describe physiological process of plants and relationship of plant to water soil and mineral nutrition.

CO-2 The student after completion of this course will be able to describe transport of organic substance and basic of enzymology.

CO-3 Student shall be able to deal with respiration process and nitrogen and lipid metabolism.

CO-4 Student shall be able to deal with growth and development process of plant.

CO-5 Student shall be able to deal with the basic concept of genetic engineering and biotechnology.

<u>B. Sc. III (B)</u> <u>Ecological & Utilization of Plants</u>

CO-1 Student shall be able to understand the biological and physiological factors of environment and their existence and importance to environment. CO-2 Student shall be able to explain the community ecology and functioning of ecosystem.

CO-3 Student shall be able to understand the population ecology and bio geographical region and vegetation types of India.

CO-4 Student shall be able to understand the utilization of plant.

CO-5 Student shall be able to understand the general account of spices, medicinal, beverages plant and rubber.

Department of Chemistry

Program outcomes- B.Sc. Chemistry

PO-1 Broud and balance knowledge in chemistry in addition to understanding of key chemical concepts, principles and theories.

PO-2 To develop students ability and skill to acquire experience over solving bath theoretical and applied chemistry problem.

PO-3 To provide knowledge and skill to the students thus enabling them to undertake further studies in chemistry in related areas or multidisciplinary areas that can be helpful for self-employment/entrepreneurship.

PO-4 To enable the graduate preplan for national as well as international competitive examinations, especially UGC-CSIR NET and UPSC Civil services examination.

PO-5 Solve the question and also think concept and independently draw a logical conclusion.

Program Specific Outcomes:- B.Sc. Chemistry

PSO-1 Students will be able to use the evidence based comparative chemistry approach to explain the chemical synthesis and analysis.

PSO-2 The students will be able to understand the characterization of materials.

PSO-3 The course curriculum has been designed to provide opportunity to act as team player by contributing in laboratory, field based situation and industry.

PSO-4 develop critical thinking ability by way of solving problems /numerical using basic chemistry knowledge and concepts.

PSO-5 Develop comprehensive knowledge and understanding of both theoretical and experimental knowledge in various fields of interest like physical chemistry, inorganic chemistry, analytical chemistry, organic chemistry etc. also capable of using of advance instruments.

<u>Course outcome</u> **B.Sc. 1**st year <u>Inorganic chemistry</u>

CO-1 To understand atomic theory of matter, composition of atom.

CO-2 Physical and chemical characteristics of elements in various groups and periods according to panic size, charge etc. and position in periodic table.

CO-3 To understand the hybridization in Inorganic malecules.

CO-4 To know about atomic, molecular orbitals bond parameters, bond distances and energic.

CO5- Importance of Hydrogen bonding's, metallic bonding.

Organic chemistry

CO-1 Basic of organic molecules, structure, bonding reactivity and reaction mechanisms.

CO-2 Aromatic compounds and aromaticity, mechanism of aromatic reactions.

CO-3 Reactivity, Stability of organic molecules, structure, stereo chemistry.

CO-4 Understanding Hybridization and geometry of atoms, 3-P structure of organic molecules identifying chiral centers. CO-5 Comparison b/w E_1 and E_2 rain.

Physical chemistry

CO-1 To understand solid state and Braggg's eqn.

CO-2 To understand chemical kinetics or chemical reaction and effect of temperature on various reactions.

CO-3 To know about surface reactions solid substances/metals. CO-4 To discuss the colloidal state and Brownian motion, Tindal effect in surface chemistry.

CO-5 To understand about nature of gases like ideal and Real gases and also about Ideal gas eruation.

Practical Course Outcome

PCO-1 To know about two acid and two base radical to seprate in inorganic mixture.

PCO-2 To understand the calculation of surface tension with the help of stalagnometer stand pycnometer.

PCO-3 Measurement of viscosity using viscometer.

<u>Course outcome</u> **B.Sc. 2nd** year <u>Inorganic chemistry</u>

CO-1 Understand the electronic configuration and various properties of d and f block elements.

CO-2 Know the VBT theory of complexs.

CO-3 Understand the various properties and extraction methods of Lanthanides and actinides.

CO-4 To know about acids and bases.

Organic chemistry

CO-1 Organic chemistry reactions and reaction mechanism.

CO-2 To understand the mono, di and tri hydric alcohol.

CO-3 To know about various carbonyl compounds like aldehydes and Ketones.

CO-4 To know about heterocyclic compound or their methods of preparation.

Physical chemistry

CO-1 To understand the various laws of thermodynamics like $1^{\mbox{st}}$, $2^{\mbox{nd}}$, or $3^{\mbox{rd}}$.

CO-2 To understand the cell reaction and about galvanic cell under electrochemistry.

CO-3 To know about theories and protection methods of carrosion.

CO-4 Understanding the applications of thermodynamics Joule Thompson effects, partial molar quantities.

Practical Course Outcome

CO-1 Discussion about synthesis and analysis by preparing the standard solution given.

CO-2 To know about functional group specific group identification in given organic compound.

CO-3 To understand chromatography.

<u>Course outcome</u> **B.Sc. 3**rd year Inorganic Chemistry

CO-1 To understand about co-ordination compounds its nomenclature, theories, orbital splitting in complexes, chelate. CO-2 Transition metals its stability, color, oxidation, states and complexes. CO-3 Know about Bio-inorganic chemistry-metal ions in biological system, its toxicity, hemoglobin.

CO-4 Understanding the separation of Lanthanoids and Actinoids, Its color, spectry and magnetic behavior.

Organic Chemistry

CO-1 To study about UV, NMK and ESK spectroscopy.

CO-2 Knowledge about Synthetic dyes and Rubbers.

CO-3 Understand the chemistry of organometallic compounds and its daily use.

CO-4 Industrial uses of polymers.

Physical chemistry

CO-1 To know about quantum chemistry 1-D box particle, SHO particle.

CO-2 To know about physical espects of Rigid Ratoror, simple harmonic oscillator molecular.

CO-3 To know about Roults Law.

CO-4 Discuss about Jablonski diagram.

Practical Course Outcome

CO-1 Potentiometric Titrations of (i) strong acid vs strong base.

(ii) Weak acid vs strong base.

(iii) Weak acid Vs weak base.

CO-2 Conduct metric titration of (i) strong acid

(ii) strong base

(iii) weak base vs strong acid

CO-3 Determination of physical constant M.P. and B.P.

CO-4 Determination specific relations and percentage of to opticallycative substance by polarometrically.

Department of Zoology Program outcome

Three year degree program in zoology A student will be able to....

PO1- Depict, carry out &learn of major concept in zoology.

PO2- develop an awareness of the impact of zoology on the atmosphere.

PO3- to ingrain scientific temperament in the student.

PO4- understand the phylum history and evolution of chordates &non – Chordates by graph /picture/model etc.

PO5- to study and understand the micro-organism and their pathogenicity sings .symptoms & prevention.

Program Specific outcomes

PSO1- Gain the knowledge about structural organization of Animal and their component

PSO2- understand the cell transformation .immunity & cancer.

PSO3- to study and understand the vertebrate &invertebrate and their Physiology and anatomy.

PSO4- Know about cellular organization.

PSO5- To study the hormones receptor .hormones gland .and their disorder.

PSO6- To study about ethology & their pattern.

PSO7- Understand the blood coagulation system and their type's .through practical.

PSO8- solve the problems and also think methodology and draw a logical conclusion .

PSO9- understand about pathogenic micro- organism their symptoms and treatment

PSO10- Study and understand the DNA recombinant technique and cell physiology.

<u>Course outcome</u> <u>B. Sc. I (Paper I)</u> <u>Cell biology and non-chordates</u>

CO1- understand the DNA&RNA .structure and Importance

CO2- understand about immunity and their role .transplant rejection.

CO3- to study the internal as well as external character of Vertebrate.

CO4- To study the pathogenicity, prevention, sings, and symptoms.

CO5- understand about pathogenic vector and their life cycle in Different types of host. CO6- To study the classification & general character of Mollusca and their role in pear/formation.

<u>B. Sc. I (Paper II)</u> <u>Chordate and Embryology</u>

CO1- to study the evolutionary importance of hemichordate & protochordata.

CO2- understand about migration of fishes, poisonous and non –poisonous snakes. & antivenin.

CO3- to study the different types of mammals their adaptation and affinities.

CO4- understand the artificial fertilization and their role.

CO5- study the types of placenta in different organism.

<u>B. Sc. II (Paper I)</u> Anatomy and physiology

CO1- Understand the role of integument in adaptation, evolution and protection.

CO2- To study the evolution of heart &kidney, aortic arch and urogenital system.

CO3- understand the skeleton system in the chordate and their role.

CO4- to study the different types of endocrine gland and their role in the chordate.

CO5- understand about nervous system and their types by model and graph.

CO6- understand the mechanism and control of breathing and cardiac cycle.

CO7- understand the mechanism of osmoregulation .nerve impulse and excretion.

<u>B. Sc. II (Paper II)</u>

<u>Vertebrates Endocrinology , reproductive, biology, Behavior, Evolution and</u> <u>applied biology</u>

CO1- to study the general character, action and disorder of hormones.

CO2- Understand the Genic Labours related problem and their Disorder.

CO3- To study the Lacto genesis and pregnancy and parturition

CO4- Understand the process of evolution and their evidences.

CO5- Understand the role of behaviors in adaptation and different stager of ages.

CO6- Understand the biological and chemical method for pest control.

<u>B. Sc. III (Paper I)</u>

Ecology, Environmental- biology, Taxicology, Microbiology, and Modical goology

Microbiology, and Medical zoology

CO1- to study about pollution and their pathogenic effect.

CO2- to study the environmental conservation & environmental impact assessment

CO1- understand about different type of toxic material and their fatal period treatment.

CO1- understand about the pathogenic micro-organism & their vector and treatment.

CO2- understand the process of water and sewage treatment

<u>B. Sc. III (Paper II)</u>

<u>Genetics, cell physiology, biochemistry ,</u> <u>Biotechnology and bio technique</u>

CO1- understand the chromosomal disorder & single gene disorder .

CO2- understand the cell membrane transportation & their role in the metabolic activity.

CO1- to study the basic structure & function of amino acid.

CO2- understand the metabolism of carbohydrates, protein and lipid,

CO1- -understand the scope &importance of biotechnology

CO2- to study the recombinant DNA technology and their application.

Department of Science B.Sc. Maths Program outcome

Student will be able to-

PO-1 analyze, test, interpret, and form independent in both academic and non-academic control. Recognize and appreciate the connection between theory and application.

PO-2 explaining mathematical reason to students often not only enables them to construct mathematical truths for themselves but also help them understand mathematics.

PO-3 reasoning ability.

PO-4 have and appropriate set of professional skill to ensure a productive career.

PO-5 think critically and take informed decisions after identifying the accuracy and validity of their assumption and ideas form intellectual, organizational and personal perspectives.

Program Specific Outcome

B. Sc. students will able to:

PSO-1 be familiar with different areas of Mathematics.

PSO-2 be prepare to use mathematics. Not only in the discipline of mathematics, but also in other disciplines and in their future endeavours.

PSO-3 identify suitable existing methods of analysis, if any, and assess his/her strengths and weaknesses in the context of the problem being considered.

PSO-4 understand the Concepts of algebra which include equations numbers and algebraic structures.

PSO-5 construct abstract models using appropriate mathematical and statistical tools.

PSO-6 think critically and communicate clearly mathematical concepts and solution to real-world problems.

PSO-7 recognize what constitutes mathematical thinking. Including the ability to produce and judge the validity of rigorous mathematical arguments.

PSO-8 develop the skills necessary to formulate and understand proofs and to provide justification.

PSO-9 on completion of the program the Students are well poised to pursue careers in alealemia, industry and other areas of mathematics.

PSO-10 to use concepts of analysis in saving problem. The concept include sets, numbers, functions and convergence.

PSO-11 identify the application of mathematics in other disciplines and society.

PSO12- understand mathematics ideas from basic axioms.

<u>Course Outcome</u> <u>B.Sc. I</u> <u>Algebra and Trigonometry</u>

The students after the completion of course will be able to-

CO-1 find the inverse of matrix, canonical form, rank of matrix, apply the echelon form, calculate the Eigen vector, Eigen value and characteristic equation and apply the Cayley Hamilton theorem.

CO-2 determine and calculate the Descartes's rule of signs and solution of cubic equation (Cardon's method) and apply biquadratic equation.

CO-3 describe group theory with examples and simple properties , to find the subgroups, Number of cyclic group, Number of generator of group. Apply Lagrange's theorem and its consequences, to find normal subgroup and apply their property.

CO-4 describe the homomorphism and isomorphism of group with example and simple properties. Describe Ring and Subring with example, integral domain and field with example and solve as every theorem in group theory and Ring theory has its proof and solution.

CO-5 apply De-moiré's theorem to solve related problem and expansion of trigonometrically function, Gregory's series and related problem.

<u>Calculus</u>

The students after the completion of this course will be able to-

CO-1 to test the continuity and differentiability of function of one variable expand a function using Taylor and Maclaurin series.

CO-2 calculate Asymptotes curvature and test for concavity and convexity.

CO-3 calculate and solve the definite and indefinite integrals.

CO-4 define exact differential equation and solve related problem, calculate first order higher degree equation solvable for x,y,p.

CO-5 determine and solve Linear differential equations of second order. Students able to changing the dependent variable/the independent variable.

Vector Analysis & Geometry

The students after the completion of this course will be able to-

CO-1 represent vector analytically and geometrically and compute dot and cross products for presentations of lines. Calculate and solve Vector differentiation, Gradient, divergence and curl.

CO-2 analyse vector function to find derivatives, determine and calculate theorem of Gauss, Green, Stokes and solve their related problems.

CO-3 find tracing of econies.

CO-4 describe cone, Sphere, Cylinder, Straight line, Plane, Central Conicoids, Generating lines etc.

<u>B.Sc. II</u>

Advance Calculus

The students after the completion of this course will be able to-

CO-1 define sequence, limit of sequence with example and solve their related problem. Testing comparison test, Cauchy's integral test, Ration test, Raabe's Logarithmic, De-Morgan, Leibnitz's test Etc.

CO-2 define continuity, sequential continuity, uniform continuity, testing and solve their related problem. Student will be able to proof mean value theorem and their geometrical interpretation and solve their related problem.

CO-3 find the limit of a function of one and two and test its continuity and differentiability. Determine Jacobian of two and three variables.

CO-4 determine envelopes, maxima, minima and saddle points of functions of two variables, Beta-Gamma functions and solve the double and triple integration.

Differential Equations

The students after the completion of this course will be able to-

CO-1 method of solution of the Differential Equations.

CO-2 define and solve the Laplace Transformation with example and solve Differential Equations using the Laplace transform technique.

CO-3 solve the partial Differential Equation of the first order and apply the Charpit's method.

CO-4 solve the Partial Differential Equation of second and higher order. Solve the homogeneous and non-homogenous equation with constant coefficient.

CO-5 apply Euler Equation for functional and solve their related problem. Find Jacobi and Legendre condition.

Mechanics

The students after the completion of this course will be able to-

CO-1 define virtual work with example and Catenary with example and solve their related problem.

CO-2 find the velocity and acceleration of a moving particle.

CO-3 the students after the completion of this course will be able to describe the attraction and potential of different particles (Moving and Static)

CO-4 study of interaction of forces between solids in mechanical systems.

CO-5 centre of mass and inertia tensor and mechanical systems.

<u>B.Sc. III</u>

<u>Analysis</u>

The students after the completion of this course will be able to-

CO-1 determine the Fourier series of full and half range of any function of one variable.

CO-2 apply Schwarz and Young's theorem on various functions.

CO-3 Define Riemann integral and solve their related problem.

CO-4 determine fundamental theorem of integral calculus and mean value theorems of integral calculus.

CO-5 testing Comparison test, Abel's test and Dirichlet's tests.

CO-6 define complex number with geometric representation. Define continuity and differentiability of complex function with example.

CO-7 define analytic function, Cauchy-Riemann equations, Harmonic functions with example and solve their related problem.

CO-8 study the concept of metric spaces with examples and basic concept of point set topology.

Abstract Algebra

The students after the completion of this course will be able to-

CO-1 to use various forms of "Sylow theorem" ti identify the whole structure of group.

CO-2 study the basic concept of ring Ideals, Quotient Rings, Euclidean Rings, Polynomial Rings, FD, UFD, ID, Modules, Sub modules, Homomorphism and Isomorphism of Rings Etc.

CO-3 study the basic concept of vector space with examples.

CO-4 define Linear transformation and their representation as matrices.

CO-6 state and proof rank nullity theorem and solve their related problem.

CO-7 determine inner product of two Vectors, and Inner product space.

CO-8 calculate Gram-Schmidt Orthogonalization process.

Discrete Mathematics

The students after the completion of this course will be able to-

CO-1 apply mathematical induction and study the concept of Language and grammars.

CO-2 study the concept of Relation and function.

CO-3 describe graphs, planer graph, weighted graphs, path and circuits, tree, spanning tree.

CO-4 classify the concept of Lattices and Boolean algebra.

CO-5 describe the difference between Meal and Moore machine.

CO-6 compute the output of a finite state machine corresponding to their next state of the given input.

<u>B.Sc. Physics</u> Program outcomes

After successful completion of three year degree program in physics

Students will be able to:-

PO-1 To enhance the academic abilities of the students so that they can develop into a responsible citizen.

PO-2 To define the fundamental laws involved in physics.

PO-3 To understand the various physical phenomena occurring in the world.

PO-4 Motivating experiments by understanding the laws and concepts of physics.

PO-5 Solving a variety of problems by applying learnt principles an acquired skills.

PO-6 Solve the problems and draw conclusions.

PO-7 To include the scientific temperament in the scientific community.

Program Specific Outcomes:

PSO-1 Enhancing your knowledge through the given laws and principles in physics.

PSO-2 Put into practice the experiments learned in the laboratory.

<u>Course Outcome</u> <u>B.Sc. I Paper I</u> <u>PH. Mechanics</u>

CO-1 Know about law of motion coordinate system (Cartesian, Cylindrical and Spherical)

CO-2 to study the conservation of energy system of particles.

CO-3 Know about Kepler's Law, Gravitational laws and field.

PH. Oscillations

- CO-1 To understanding oscillations, simple harmoni'c socillations.
- CO-2 To study two simple harmonic motion of the same frequency.
- CO-3 Know about Lissajous figures.

PH. Properties of Matter

- CO-1 Know the elasticity.
- CO-2 To understanding Hook's Laws.
- CO-3 To study surface tension and surface energy.

PH. Electric Field and Magnetic Field

- CO-1 To study motion of charged particles in E & M field.
- CO-2 To study CRO
- CO-3 To understanding mutually parallel electric and magnetic fields.

<u>Paper II</u> <u>PH. Mathematical Background</u>

- CO-1 To study scalars and vectors, dot and cross products.
- CO-2 To understand divergence and Curl of vector fields line. Surgace and volume integrals.
- CO-3 To study Gouses divergence theorem.
- CO-4 To study Flux of the electric field.
- CO-5 To study stokes theorem.
- CO-6 To study bio and Sevart's Law.
- CO-7 To study ampere's Law.
- CO-8 To understanding Torque on a current loop.

PH. Electromagnetic Theory

- CO-1 To study electromagnetic wave introduction, characteristics.
- CO-2 To study Faraday's Law on electromagnetic Force.
- CO-3 To study mutual and self-inductance.
- CO-4 To understand Max well equations.
- CO-5 To study LCR circuits.

<u>B.Sc. II Paper I</u> <u>PH. Thermodynamics</u>

- CO-1 Know the law of thermodynamics.
- CO-2 Know the concept of path function.
- CO-3 To understanding concept of path function and paint function.
- CO-4 To understand the Entropy concept.
- CO-5 To study Thermodynamics relationship.

PH. Kinetic Theory

- CO-1 To study Maxwell relationship.
- CO-2 To study Doppler broading of spectral Lines.
- CO-3 To study Transport Phenomena in gases.

PH. Statistical Physics

- CO-1 To study the statistical basis of Thermodynamics.
- CO-2 To understanding statistical distribution of system of particles.
- CO-3 To study Bose-Einstein Theory.
- CO-4 To study Fermi-Dirac Statistics.

<u>Paper II</u> <u>Waves</u>

- CO-1 To study wave in media.
- CO-2 To understand waves, characteristics speed and nature.
- CO-3 To study Reflection, and Diffraction of sound wave.

PH. Accoustics and Optics.

- CO-1 To understanding-Interference of light.
- CO-2 To study Fermat's principle.
- CO-3 To know about principle of sonar system ranging.

<u>PH. Laser</u>

- CO-1 To study Laser system.
- CO-2 To study Einstein A and B coefficients.
- CO-3 To know types of Laser-Ruby and He-Ne and semiconductors Laser.

<u>B.Sc. III Paper I</u> <u>PH. Relativity</u>

- CO-1 To study the reference system.
- CO-2 To know Galilean invariance and conservations Law.
- CO-3 To understand the special theory of Relativity.
- CO-4 To understanding the Michelson-Morley experiment.
- CO-5 Discuss about Compton effect.

PH. Quantum Mechanics

- CO-1 To know De-Broglie hypothesis and uncertainty principle.
- CO-2 Discuss about schrodinger equations.
- CO-3 To understanding of Photo electric Effect.
- CO-4 To know different operators in quantum mechanics.

PH. Atomic and Molecular Physics

- CO-1 To study the Raman Spectra.
- CO-2 To know the spectra of H-atom.
- CO-3 To study the Zeeman Effect.

<u>Paper II</u> <u>Waves</u>

CO-1 To study the Amorphous and crystalline solid.

- CO-2 To understand Miller indices.
- CO-3 To study Bragg's Law.

PH. Solid State Device And Electronic

- CO-1 To know about Kroning-penny model.
- CO-2 To study about insulator, Semiconductor and Conductor.
- CO-3 Discuss about special purpose.
- CO-4 To study half and full wave rectifiers.
- CO-5 To understand FET and LED characteristics and its application.

2.6.2 Programme Outcomes of Bachelor of Commerce

Following are the program out comes and course outcomes evaluated by the institution after successful completion of three years degree program in commerce, A student will be able to :-

PO (1) Develop numerical abilities and understanding of concepts and tools in all disciplines of accounting.

PO (2) Apply thought and knowledge to business correspondence, law and legalization related to commerce and business.

PO (3) Solve the problem related to all disciplines of taxation, and auditing and statistics.

PO (4) Develop an awareness of impact of recent trends in global business, industries, marketing and management.

PO (5) Tackle the basic legal issues arising in the course of business.

PO (6) Get jobs in banking sector, insurance sector, CA firms and stock market.

Course Outcomes of Business Mathematics

- (1) The student learns to use basic mathematics problem solving skills in business.
- (2) The student will understand the concept of interest and related terms, computation of interest, annuity, debaucher, discount, commission, profit and loss by using percentage.
- (3) Student will be able to solve business problems, by using linear equation matrix and determinants.

Course Outcomes of Business Law

- (1) The course provides understanding of the frame work of Indian business law.
- (2) Student gets the knowledge in the formation of contract and its essential elements for creative contract, validity of contract, breach of contract and its effect on the related parties.
- (3) Student learns about the legal consequences of special contracts like agency, bailment and pledge, indemnity and guarantee.
- (4) Gains knowledge about the Indian partnership act 1932, consumer protection act 1986, Negotiable instrument act 1881 and their amendments.

Course Outcomes of Business Communication

- (1) The students will learn effective business writing along with persuasive and appropriate verbal and nonverbal communication and interpersonal skills.
- (2) Students get knowledge of audience analysis in communication process and understand the formal and informal communication skills in corporate communication channels.
- (3) Students should be able to write various kinds of business letters reports and conduct surveys.
- (4) Students get knowledge of an effective oral sales presentation, training presentation and also learn about the modern communication.

B.Com II Course Outcomes of Cost Accounting

The student will be able to:-

- (1) Learn basics of cost accounting theory and numerical of material cost, Labor cost, overheads and preparation of cost sheet.
- (2) Prepare and fill the tender price.
- (3) Gain knowledge on costing system and implement in process costing and contract costing.
- (4) Prepare reconciliation of cost and financial account.
- (5) Access and prepare cost management techniques by break even analysis.

Course Outcomes of Statistics

The students will be able to:-

- (1) Develop the skills for scientific collection of data and determining the sample size for research and understand the concept of diagrammatic representation.
- (2) Use statistical tools and test of significance that are applied in social and business research.
- (3) Calculate measure of central tendency dispersion, skewness.
- (4) An analyze the linear regression and correlation in bivariate distribution.
- (5) Understand the competing merits of different approaches to index number problem and methods for dealing with quality change in new goods.
- (6) Understand the concept of the forecasting methods for demand, industry Vs Company sales forecast and the various components of time series and practical application of trends.
- (7) Solve the basic problem in probability theory including problems involving the addition and multiplication law of probability, conditional probability and Bayes theorem.
- (8) Understand the basics of statistics needed for the job force and communicate key statistical concept to non statistician.

Course Outcomes of Principal of Business management

The student will be able to :-

- (1) Understand the concept nature, process and significance of management, functional areas of management. Analyze the classical and neo classical thoughts of management.
- (2) Evaluate and integrate principal and thoughts of planning, decision making, motivation, organization, leadership and managerial control into management practices in the global context.
- (3) Understand the concept nature and process of planned resistance to change of management in a environment.

B.Com III

Course Outcomes of Management Account

- (1) The objective of this course is to expose the student to the applied aspect of accounting and making them familiar with techniques of ration analysis, funds flow, cash flow statement, absorption and marginal writing, break even analysis and interpretation of financial statements for decision making.
- (2) The student should be in position to make effective use of principle and techniques of standard costing and budgeting for profit planning context and resolve the business problem, which they may face as manager.

Course Outcomes of Principle Marketing

The students will be able to:-

- (1) Understand the importance of marketing as a business function and identify the primary marketing activities of an organization.
- (2) Use information about consumer behavior to inform marketing strategy and tactics like market segmentation, consumer purchasing decision.
- (3) Analyze product planning and development process, brand and trade mark, marketing mixing, price discount and plan how they contribute to the success of product.

- (4) Evaluate how to use distribution channels to market an organization's products.
- (5) Process or understand the methods of promotion by advertising, personal selling and how to use internet as a medium for online marketing.

Course Outcomes of International Marketing

Upon completion of this course, students should be able to:-

- (1) Apply the key terms, definition and concepts use in marketing with an international perspective and compare the domestic marketing with international marketing.
- (2) Understand the foreign market entry mode decision and analyze product planning, branding, packaging, labeling and quality uses for and process foreign market.
- (3) Understand methods of international promotions, advertising, personal selling, trade fairs and exhibitions.
- (4) Understand the procedure to use distribution channels in international market, selection and appointment of foreign sales agent.
- (5) Get knowledge about export policy of India, and procedure of selection of an export product, pricing, finance documentation.

B.Com. I Group I, Paper I Financial Accounting

Students get the knowledge of accounting concepts & Principles, accounting equation, Journals, ledger, trial balance, rectification of errors, final accounts, accounts of non-trading Institutions, Hire purchase system, Installment purchase system, Accounting regarding dissolution of a partnership firm, amalgamation of firm and conversion of firm into a limited liability company. Students can apply this knowledge in various fields of accounting and get job. Tally is software package for accounting.

Group III, Paper I Business Environment

It helps getting knowledge of business environment, monetary policy, fiscal policy, globalization, poverty, unemployment, WTO, UNCTAD, world bank, IMF and its implication on trade.

Group III, Paper II Business Economics

Students are given the knowledge about micro economics, macroeconomics, concepts of demand and supply, factors of production, National income and Pricing policy in perfect competitive market, Monopoly & monopolistic competition.

B.Com. II Group I, Paper I Corporate Accounting

Students learn about issue of shares and debentures, Valuation of shares & goodwill, Final accounts of company, amalgamation of companies and consolidated balance sheet of Holding Company and its subsidiary company. Thus students can get good knowledge of accounting of corporate sector.

Group I, Paper II Company Law

Students get knowledge about types of company, formation and incorporation of company and company law 2013.

Group III, Paper II Fundamentals of Entrepreneurship

Students get the knowledge of entrepreneurship and its scope & applicability. Students are also given practical knowledge of entrepreneurship.

B.Com III Group I, Paper I Auditing

Students get knowledge about auditing of company, partnership firms, banking firm and internal check system.

Group II, Paper I Indirect taxes with GST

Students get knowledge about central excise duty, state excise duty, central GST and State GST. Having knowledge of this subject students can get jobs in CA firms.

प्राचार्य शास. **रानी** सूर्यमुखी देवी महाविद्यालय छुरिया **जिला-राजनांवगांव (छ.ग.)**