Office:- Maa Jalpa Devi Government College, Taranagar (Churu)

Courses Offered by College:-

S.No.	Course	Seats
1.	B.A.	400
2.	B.Sc.	176
3.	B.Com	100
4.	M.Sc. (Botany) (Govt. + SFS)	40
5.	M.Sc. (Botany) (Govt. + SFS)	40
6.	M.A. Geography	60
7.	M.A. Sanskrit	50

Cos and POs Summary

S.NO	PROGRAMMECODE	PROGRAMME NAME	DISCIPLINE	COURSEOUTCOME	PROGRAMMEOUTCOME	PROGRAMMESPECIFICOUTCOME
1.	3-A3P	B.A.- Bachelor of Arts	Arts	The B.A programme is a combination of three elective courses opted over a wide range. Each course has been designed keeping in mind knowledge, skills, human values and social issues of relevance.	The B.A programme has been designed with the objective of imparting the best of subject knowledge along with basic computer knowledge and language competency.	It in stils critical thinking, effective communication and social interaction. The insistence is on extensive knowledge to fight competitive exams and pursue higher studies. The curriculum design emphasizes human values and subject competence.
2.	9-C3P	B.Com.- Bachelor of Commerce	Commerce	The course exposes the students to micro concepts of Commerce and analytical skills.	The programme helps the student understand marketing strategies, entrepreneurship, banking system, economic theories, and accounting procedures.	By the end of the programme learners get theoretical and practical exposure in the commerce sector which includes Accounts, Commerce, Marketing, Management, Economics, and Environment etc.and are competent for business, banking jobs, accountant, office job and other competitive exams.

3.	6-S3P	B.Sc.- Bachelor of Science	Science	The course contents are designed to provide exposure to the core subjects and equip the students for higher education.	The programme helps in the understanding of fundamental concepts, theories, practical applications and objective conclusions.	The insistence is on skills in the laboratory, competence, understanding of phenomenon, sustainable development areas, and interdisciplinary areas of science courses.
4.	162-SANSF	M.A.- Master of Arts	Sanskrit	The students master advanced command over Sanskrit language, grammar and history.	The programme focuses on Vedic literature to develop skills in jobs related to karmkand, and purohit in defense services. It also equips the student with science of language, Indian philosophy, and discourse on Sanskrit literature.	The specific insistence is on Sanskrit grammar, translation, and essay. Discourse course is of significance for researchers and specialized study of prominent writers like Kalidasa and Bhash. It also enables to explore phonetics, rhetorics, dramaturgy, and ancient modern poetry and job opportunities atnational and international levels.
5.	172-ZOOLF	M.Sc.- Master of Science	Zoology	The course provides knowledge related to Taxonomy, Phylogeny, Structure& Functionin Invertebrates, Biological Chemistry, Immunology and Physiology, Molecular Biology, Cytogenetics, Techniquesin Biology, Evolution, Statistical methods and Computer Application in Biology	Detailed account of Chordata, origin and evolution, Developmental biology, Animal ecology and Ethology. There is a wide spectrum of job opportunities like being a College and School teacher, Zoologist, Research Scientist, Conservationist, Environmental consultant, Herpetologist, Wildlife educator, Agriculture, Sericulture, Forestry,Genomics,Fishery etc.	Specific Programmes offered include Cell Biology dealing with celltypes, membrane structure, Structural organization, cell division cell cycle, cancer, cell and tissue culture, fixation and staining, immune system; Environmental biology which incorporates study related to earth and biosphere, environmental physiology, ecosystems, Taigaand Tundra, major biogeographic regions, management of environment, resources, environmental health, legislation, environmental toxicology, methodology for environmental analysis; Entomology which deals with the study of insects, insect fossils, evolution, classification, functional organization, insect embryology, pests, management strategies, beneficial insects, vectors of diseases, ecology and social life in insects
6.	103-AGEOF Geography	M.A.- Master of Arts	Geography	The number of courses Across this programme in geography equips the Student with all aspects of physical, cultural, social Environmental and tourism geography.	The master's programme in Geography covers an extensive Area of Structural& Dynamic geomorphology, Economic Geography, Geography of Environment, Bio-geography, Agriculture Geography, Cultural Geography, Political Geography and Industrial Geography. A weekly seminar for Final year students provides exposure in Laboratory work, mapwork, Test and surveying.	The programme specific outcomes are of Immensehelpto students and opens up Opportunities for Urban Geography and planning , Regional Planning & Development, and also in the field of Tourism with the help of courses like Geography of Tourism, Geography of Population & Settlement and Remote sensing& G.I.S.

| 7. | 112-BOTF | M.Sc.-Master of Science | Botany | The student can become a Researcher, Forester, Mycologist, Plant biochemist, Conservationist, Molecular biologist, College and School teacher etc. Plant biotechnology an important area of specialization contributes towards gaining knowledge of micropropagation, embryogenesis, hybridization, tissue culture, recombinant technology, gene transfer, blotting techniques and the role of biotechnology in Society | As an outcome of this programme, the student learns about microbiology, viruses, phycology, phytoplasma mycology and plant pathology including fungal, bacterial and viral diseases, Bryology, Pteridology and Gymnosperms, ecology, phytogeography, ethnobotany and economic botany, biochemistry and plant physiology including growth regulators, taxonomy, morphology, anatomy and embryology of Angiosperms, molecular biology, biotechnology, genetics, plant breeding and biometics. | The student opting for Plant Pathology is exposed to learning related to Host Pathogen interaction, Histopathology, fungi, bacterial, viral, nematode and nonparasitic diseases; those who study Plant ecology gain information about environment, ecosystem, natural resources and pollution, Desert biomes with special reference to Rajasthan; Plant Physiology lays emphasis on the study of carbohydrates, protein, coumarins & lignins, saponins and saponogenins, tools and techniques, plant growth regulators, photophysiology and stress physiology; |

Detail of POs and COs
Faculty of Arts

GEOGRAPHY

BA GEOGRAPHY (THREE YEAR PROGRAM)

Programme Outcome

- Demonstrate knowledge of physical and cultural features of the earth and locate them on a map.
- Know about the basic disciplines of Geography and its sub branches.
- Know the basic concepts and terminologies used in Geography like interior of the earth, plate tectonic, sea floor spreading, population growth, disasters, composition and structure of atmosphere, hydrosphere, etc
- Differentiate between minerals and rocks, weather and climate, interior of the earth, basic industries, farming etc.

Course Outcome

B.A. PART-1

PAPER I: PHYSICAL GEOGRAPHY

The course enables the students the knowledge of:

- Solar system, Origin of the Earth: Nebular hypothesis, tidal hypothesis, Big Bang theory.
- Rocks: their types and characteristics. Cycle of erosion- W.M. Davis and Walter Penk.
- Composition and layers of atmosphere.
- Configuration of ocean bottom.

PAPER II: RESOURCES AND ENVIRONMENT

The course enables the students the knowledge of:

- Meaning, nature and components of resources & environment, Resources and environment interface. Distribution and utilization of minerals and energy resources- their economic and environmental significance. Major soil types and their distribution; problems of soil erosion ans soil conservation.
- Classification of environment: Natural and Human.
- Environmental management: Forest, soil and wild life and its awareness

B.A. PART I PRACTICAL

- Purpose of various practical exercise is the develop curiosity about that subject
- due to these different practical exercise students know about different aspects of geography.

B.A. PART-II

PAPER I: HUMAN GEOGRAPHY

The course enables the students the knowledge of:

- Nature and scope of human geography Branches of human geography; Principles of human geography
- Division of mankind: spatial distribution, physical and social profile of racial groups, ethnic groups, tribal groups in the world and in India
- Humanadaptation to environment, Distribution of population, Population regions of India.

PAPER II: GEOGRAPHY OF RAJASTHAN

The course enables the students the knowledge of:

- Introduction: Formation and administrative setting of the state
- Agricultural and economic aspects of the state
- Power and energy resources, Demographic structure, Geographical regions of Rajasthan

B.A. PART II PRACTICAL

- Purpose of various practical exercise is the develop curiosity about that subject
- due to these different practical exercise students know about different aspects of geography.

B.A. PART-II

PAPER I: REGIONAL GEOGRAPHY

The course enables the students the knowledge of:

- Concept of region, Classification of region - geographical and economic
- Regional study of United States of America, Regional study of China, Regional study of South Africa and Brazil, Regional study of Bangladesh, Nepal and Sri Lanka

PAPER- II GEOGRAPHY OF INDIA

The course enables the students the knowledge of:

- India in the context of the South-east and South Asia, Regional and seasonal variation of climate
- Agriculture, Irrigation and multipurpose projects
- Resources: Minerals- iron ore, mica, manganese, Power- coal, petroleum, hydropower, atomic power
- Changing nature of Indian economy- agricultural growth during the plan period

- Purpose of various practical exercise is the develop curiosity about that subject
- due to these different practical exercise students know about different aspects of geography.

M.A. (Geography)

COURSE OUTCOME

The number of courses across this programme in geography equips the student with all aspects of physical, cultural, social environmental and tourism geography.

PROGRAMME OUTCOME

The master's programme in geography covers an extensive area of Structural & Dynamic geomorphology, Economic Geography, Geography of Environment, Bio- geography, Agriculture Geography, Cultural Geography, Political Geography and Industrial Geography. A weekly seminar for Final year students provides exposure in Laboratory work, map work, test and surveying

PROGRAMME SPECIFIC OUTCOME

The programme specific outcomes are of immense help to students and opens up opportunities for Urban Geography and planning , Regional Planning & Development, and also in the field of tourism with the help of courses like Geography of Tourism, Geography of Population & Settlement and Remote sensing & G.I.S.

English Literature

Programme outcomes for English Literature

By studying literature, pupils can improve their communication abilities and behaviour attitudes to higher standards. The study of literature gives the students the opportunity to explore their creativity in reading, writing, and enhance their thinking capacity

Programme Specific outcomes

The curriculum designed for English Literature covers all the literature from early British period to post-Colonial Period. It introduces students to a wide range of literary tradition and familiarises them with different facets of each literary era. They come across a jumble of feelings and ideas. They are aware of the literary history and how it influences literary artists' minds. Additionally, it promotes pupils' reading and writing habits. The extensive reading and writing improve their command over the language.The course prepares students for future   success.

Course Outcomes

BA Part-I- Paper-I Poetry and Drama

- Introducing the students with all forms and genres of poetry and drama.
- To improve communication skills in the students.

BA Part-I-Paper-II Prose and Fiction

- To acquaint them to prose and fiction.
- Reading of essays and stories encourage their creativity.

BA Part-II- Paper-I Poetry and Drama

After Completing This Course, the Students will be able to Analyze Poetry and Drama Prescribed in Their Syllabus.

BA Part-II-Paper-II Prose and Fiction

- Utilize Their Knowledge in Spoken English.
- Think About Their Aim of Life While Reading Essays, Stories and Novels of Hardy.

BA Part-III- Paper-I Poetry and Drama

- After finishing final year, the students are now familiar with all forms of poetry and drama.
- They are acquainted with post-colonial literature.
- They are also familiar with Commonwealth Literature.
- They now have an all -round approach to world literature.

BA Part-III-Paper-II Prose and Fiction

- The final year course of prose and fiction imparts recognition of Indian Prose and Fiction.
- The students have now developed understanding of the lessons imparted in the essays and stories.

History

Course Outcomes

BA Part I

PAPER-I : HISTORY OF INDIA FROM EARLIEST TIMES TO 1206 A.D.

After the completion of the course the student should be able to

- Understand the Ancient history of India
- Discuss main features of Indus-Saraswati Civilization, the contribution of Magadha Empire and the causes of their decline, the features of Gupta Dynasty.
- Explain the rise of Buddhism and Jainism, the different political power in Pre-Gupta period, the India in Post-Gupta Period.

PAPER-II : HISTORY OF MODERN WORLD (1453-1950 A.D.)

After the completion of the course the student should be able to

- Explain Reformation and Counter Reformation, the French Revolution, Unification of Italy and Germany, the causes of imperialism in Asia and Africa, the causes and results of Second World War and the emergence of Modern China, Japan and Turkey.
- Discuss the American war of Independence, First World War, the causes of rise of Fascism and Nazism and the functions of UNO.

BA Part II

Paper- I: History of Medieval India (1206-1740 A.D.)

- After the completion of the course the student should be able to Understand the medieval history of India, Political condition, administrative and economic regulation in medieval India, The establishment of Mughal Empire and Nature of Mughal State.

PAPER- II : HISTORY OF RAJASTHAN FROM EARLIEST TIMES TO 1956 A.D.

After the completion of the course the student should be able to

- Outline the proto-historic Rajasthan
- Explain the origin of Rajputs, the causes and impact of Maratha penetration in Rajputana, the contribution of Prajamandals in freedom movement and the Rajasthani art and literature.
- Discuss the Peasant of Bijolia and the Feudalism in Rajput states.

BA Part III

PAPER-I: MODERN INDIAN HISTORY (1740-1956A.D.)

After the completion of the course the student should be able to

- Explain the British expansion in Bengal, the causes of the failure of the Marathas and the economic impact of British Rule.
- Discuss the emergence of regional power, the Maratha struggle with British Power, the main features of Permanent settlement, Raiyyatwari and Mahalwari revenue settlements, the economic Impact of British Rule.
- Outline of India's struggle for freedom
- Discuss the reorganization of Indian states.

Paper- II: FOUNDATIONS OF INDIAN CULTURE

After the completion of the course the student should be able to

- Discuss the main features of Indian culture, varna and ashram system and main centres of ancient Indian Education.
- Explain the cultural importance of the Puranas, the salient features of the Indus and Mauryan Art, the Architecture of Mughal period, the Bhakti and Sufism, the socio-religious contribution of Brahma Samaj and the socio-religious contribution of Arya Samaj.

Hindi Literature

अपेक्षित परिणाम

कक्षा बीए भाग प्रथम वर्ष

. सामान्य हिंदी

- हिंदी काव्य में गद्य–पद्य के द्वारा हिंदी–साहित्य की विविध विधाओं का छात्राओं को सामान्य सौन्दर्य–बोध का परिचय करवाया जा सकेगा।
- पद्य काव्य में भक्तिकाल से लेकर आधुनिक काल तक (काव्य) का परिचयात्मक मूल्यांकन किया जा सकेगा।
- हिंदी व्याकरण का ज्ञान जैसे : संक्षेपण, पल्लवन व शुद्धीकरण के बारे में बताया जा सकता है।
- विविध साहित्यिक विद्याओं के (गद्य–पद्य व्याकरण आदि) अध्ययन को ध्यान में रखकर उपर्युक्त योजना का निर्माण एवं उसका क्रियान्वयन कर सकेंगी।
- प्रतियोगिता परीक्षा में सामान्य हिंदी पर पूछे जाने वाले प्रश्नों को विस्तार से समझा सकेंगी।

बी.ए. प्रथम वर्ष प्रथम प्रश्न पत्र

'' प्राचीन एवं मध्यकालीन काव्य''

- प्राचीन एवं मध्यकालीन साहित्य ज्ञान अर्जित किया जा सकेगा साथ ही स्वर्ण युग के बारे में बताया जा सकेगा।
- प्राचीन व मध्यकालीन काव्य में दर्शन, नीति ज्ञान व संगीत का जो वर्णन किया है उसे जीवन में अपनाने की सीख ले सकती हैं।
- अनुकूल परिस्थितियां उत्पन्न कर सौदर्य बोध के साथ आज के जीवन में भक्तिकालीन कवियों द्वारा जो उपदेष दिए हैं। उससे तनाव कम कर सकेंगी। जीवन के सही मार्ग पर चल सकेंगी।
- काव्यषास्त्र के साथ –साथ में प्रयुक्त अलंकारों को प्रतियोगिताओं में पूछे जाने वालों प्रश्नों को सही से समझा सकेंगी।

बी.ए. प्रथम वर्ष द्वितीय प्रश्न पत्र

'' कथा साहित्य''

- गद्य साहित्य में उपन्यास –कहानी के इतिहास के महत्व को भली भांति समझा सकेंगी।
- यथार्थपरक धरातल को समझ सकेंगी।
- छात्राएं देश की नींव हैं। चित्रा मुदगल के उपन्यास ''एक जमीन अपनी'' से अपने हक के प्रति आवाज उठा सकेंगी।

बी.ए. द्वितीय वर्ष प्रथम प्रश्न पत्र

'' रीतिकालीन काव्य ''

- केषव, बिहारी, देव, पद्माकर, सेनापति रज्जब आदि कवियों के काव्य को प
- वर्तमान परिप्रेक्ष्य के मध्येनजर वाद–विवाद की स्थिति में केषव की '' संवाद योजना'' से संवाद स्थापित करने की कला सीख पाएंगी।
- भूषण के पदों को प
- छंद, काव्यशषास्त्र (काव्य हेतु, काव्य प्रयोजन) और हिंदी साहित्य के इतिहास से प्रतियोगी परीक्षाओं में पेपर आसानी से हल कर सकेंगी।

बी.ए. द्वितीय वर्ष द्वितीय प्रश्न पत्र

'' नाटक एवं एकांकी ''

- भारतेंदु हरिष्चंद्र के नाटक ''अंधेर नगरी'' को पढ़–समझकर आज के वातावरण का विश्लेषण एवं मूल्यांकन कर सकेंगी।
- नाटक एवं एकांकी को पढ़कर रंगमंच के प्रति रूचि जागृत कर पाएंगी।
- नाटक एवं एकांकी विद्याओं की विविध बौलियों को समझकर पठित नाटकों एवं एकांकियों से बदलते स्वरूप से परिचित हो सकेंगी।
- नाटक एवं एकांकी के इतिहास को समझकर दोनों में अंतर कर सकेंगी।

बी.ए. तृतीय वर्ष प्रथम प्रश्न पत्र

- मैथिलीषरण गुप्त, दुष्यंत, नंदकिषोर आचार्य जैसे कवियों का अध्ययन कर आधुनिक और उत्तर आधुनिक वाद में रचनाओं की लेखनी को समझ पाएंगी।
- पंत की कविताएं ''मौन निमंत्रण, एक तारा'' ''नौका विहार'' कविताओं के माध्यम से प्रकृति से रूबरू हो पाएंगी। साथ ही प्रकृति से तारतम्य स्थापित कर उसके संरक्षण व पोषण की वाहक बन पाएंगी।
- स्त्री विमर्ष, दलित विमर्ष, विकलांग (दिव्यांग) विमर्ष को पढ़कर वर्तमान परिप्रेक्ष्य में सफल जीवन यापन कर पाएंगी।
- आधुनिक काल की विधाओं को पढ़कर षिक्षण एवं षिक्षणेत्तर कार्यक्रमों का सफल आयोजन एवं मूल्यांकन कर सकेंगी।

बी.ए. तृतीय वर्ष द्वितीय प्रश्न पत्र

'' निबंध एवं भाषा ''

- प्रवृति विषेष के प्रमुख निबंधकारों के व्यक्तित्व–कृतित्व और युगीन परिवेष से छात्राएं सम्यक रूप से अवगत हो पाएंगी।
- निबंध के विविध सोपानों का अध्ययन करते हुए निबंध के उद्गम और तत्वों को समझ पाएंगी।
- निबंध के विविध सोपानों का अध्ययन करते हुए निबंध के उद्गम और तत्वों को समझ पाएंगी।
- ''साहित्य समाज का दर्पण है'' इस कथन को वर्तमान परिप्रेक्ष्य में भली भांति समझ पाएंगी।
- भाषा विज्ञान को पढ़कर हिंदी के विविध रूपों एवं भाषागत विषेषताओं को समझा पाएंगी।
- छात्राएं हिंदी भाषा के विविध रूपों में विभेद करते हुए भाषा का सांदर्भिक अर्थग्रहण तथा अभिव्यक्त करने की
- क्षमता उत्पन्न कर सकेंगी।
- भाषा विज्ञान को पढ़कर एवं समझकर व्याकरण के विविध अंगों एवं भाषा के शुद्ध प्रयोग की ओर प्रवृत हो सकेंगी।

Political Science

Program Outcome for UG

- Students will be able to Analyse political and policy problems and formulate policy options, political problems arguments information and or theories and Discuss the major theories and concept of Political Science and its subfields.

Course Outcome

B A Part I

Paper. 1 Foundation of Political Science

- The course contains basic knowledge of political science, Concepts, theories of political science.
- The paper helpful of students for competition exams.

Paper. II. Indian political thinkers

- This paper provides us wide knowledge of rogon state theory, swadeshi, ahinsa etc.
- This paper is very important of classic medieval and modern periods

B A Part II

Paper. 1. Major political system

- study of the constitution of United Kingdom, united states of America, japan, china, Pakistan, France, Switzerland.
- Very important paper to know about different country constitutions.

Paper. II. Indian political system

In the study of the paper of Indian political system students will be able to understand about Indian political system and Indian constitution.

BA Part III

Paper .I. Western political thinker (From Plato to Marx)

- To origin of the knowledge in political thought.
- identify the most important contribution to modern Western political thoughts and explain why their contributions are important.

Paper. II. International Relation

- to develop theoretical insight on International Relation.
- International and Regional organisation students understand the Indian foreign policy and relation between neighbouring countries.

Sanskrit

बीए पार्ट प्रथम

प्रथम प्रश्न पत्र

इकाई 01 – नाटक – स्वप्नवासवदत्तम

भास के साहित्य को समझा जा सकता है। नाटक लेखन के क्षेत्र में इस ग्रंथ से सहायता मिलती है।

इकाई 02– रामायण – बालकाण्ड – प्रथम सर्ग

रामकथा का सार मिल जाता है। इससे पता चलता है कि भगवान राम ने न तो भगवती सीता को निकाला था और न ही षम्बूक को मारा था।

इकाई 03– मनुस्मृति

तत्कालीन समाज व्यवस्था की एक झलक मिलती है। इससे यह समझ में आता है कि समाज में क्या उचित है और क्या अनुचित।

इकाई 04 – हितोपदेष

कहानी लेखन के लिए यह एक आदर्ष सिद्ध होता है।

इकाई 05 – अलंकार

काव्य गीतों की रचना में इससे पर्याप्त सहायता मिलती है।

द्वितीय प्रश्न पत्र

इकाई 01 – भारतीय संस्कृति के तत्व

प्राचीन भारत की संपूर्ण व्यवस्था को समझने के लिए मानक ग्रन्थ की तरह है।

इकाई 02– पद्य साहित्य – रघुवंश

कालीदास के पद्य साहित्य को समझने के साथ पद्य रचना में इससे प्रभूत सहायता मिल सकती है।

इकाई 03– अनुवाद

संस्कृत बोलना और लिखना दोनों में यह सर्वोत्तम सहायक है।

इकाई 04 एवं 05 – व्याकरण – लघु सिद्धान्त कौमुदी

संस्कृत भाषा में शुद्ध रचना करने में यह बहुत उपयोगी है। इससे भाषा का ज्ञान बहुत बढ़ता है। कर्ता और क्रिया के द्वारा वाक्यों के निर्माण में यह बहुत सहायक है।

बीए पार्ट द्वितीय

प्रथम प्रश्न पत्र

इकाई 01 एवं 02 – नाटक – अभिज्ञानषाकुन्तलम्

इससे कालिदास साहित्य को अष्छी तरह से समझा जा सकता है। यदि लेखन में रूचि हो, तो लेखन की शैली का आदर्ष रूप क्या हो, यह इसमें मिलता है।

इकाई 03– छंद

गीतों की रचना करने में यह सबसे सहायक सिद्ध हो सकता है।

इकाई 04– प्रमुख कृत, तद्धित एवं स्त्री प्रत्यय

इससे ऐतिहासिक समय में जाति, वर्ण और स्त्री की स्थिति को समझने में सहायता मिल सकती है।

इकाई 05 – संस्कृत साहित्य का इतिहास

इससे प्राचीनकाल के भारत की सामाजिक सांस्कृतिक व्यवस्था को समझा जा सकता है।

बीए पार्ट द्वितीय

द्वितीय प्रश्न पत्र

इकाई 01 – ऋक्सूक्त

इससे ऋग्वेदकालीन सामाजिक एवं धार्मिक व्यवस्थाओं को जान सकते हैं।

इकाई 02– ईषोपनिषद्

इससे भारतीय दर्षन को समझने में मदद मिलती है।

इकाई 03– गद्य साहित्य– शुकनासोपदेष

गद्य साहित्य के लेखन में रूचि रखने वालों के लिए यह आदर्ष रूप गद्य है।

इकाई 04 – वाक्य एवं समास

संस्कृत भाषा को बोलने एवं उसमें लिखने की इच्छा रखने वालों के लिए यह बहुत लाभकारी है।

इकाई 05 – कारक प्रकरण

जैसा की इकाई 04 में बताया गया।

बीए पार्ट तृतीय

प्रथम प्रश्न पत्र

इकाई 01 – कुमारसम्भवम

कालिदास साहित्य को समझने के साथ प्रौढ़ पद्य की रचना में यह बहुत सहायक है।

इकाई 02– किरातार्जुनीयम्

महाभारतकालीन राजनीति परिदृष्य का इससे ज्ञान प्राप्त होता है।

इकाई 03– दषकुमार चरितम्

इससे तत्कालीन राजनीतिक दुरभिसंधियों का पता चलता है। साथ ही गद्य लेखन शैली का यह उत्तम प्ररूप है। इससे लेखन में बहुत सहायता मिल

सकती है।

इकाई 04 – याज्ञवल्क्यस्मृति – दाय भाग

भारतीय न्याय प्रणाली में संपति के बंटवारे को समझने के लिए यह बहुत उपयोगी है।

इकाई 05 – निबंध रचना

संस्कृत लिखना और बोलना दोनों में इसका ज्ञान उपयोगी है।

बीए पार्ट तृतीय

द्वितीय प्रश्न पत्र

इकाई 01 – तर्कसंग्रह

भारतीय न्याय एवं वैषेषिक दर्षन की आधारभूत

इकाई 02– भारतीय दर्षन के सिद्धान्त

इससे भारतीय छह आस्तिक एवं तीन नास्तिक दर्षनों की आधारभूत समझ प्राप्त होती है।

इकाई 03– नीतिषतकम

पद्य लेखन के लिए यह मानदण्ड है। जीवनोपयोगी सूत्रों के अतिरिक्त यह पद्यलेखन में भी बहुत सहायक है।

इकाई 04 – भगवद्गीता (अध्याय 02 एवं 03)

भारतीय मनीषा के इस महान ग्रन्थ के इन अध्यायो में मनुष्य की स्थितिप्रज्ञता बतायी गयी है, जो मनुष्य के जीवन का वास्तविक उददेष्य है।

इकाई 05 – तिड्न्त प्रकरण

संस्कृत भाषा में शुद्ध लेखन के लिए इसका अध्ययन होना बहुत आवयष्क है। इसे हर छात्र को जानना चाहिए।

COURSE OUTCOME

The students master advanced command over Sanskrit language, grammar and history.

PROGRAMME OUTCOME

The programme focuses on Vedic literature to develop skills in jobs related to karmkand, and purohit in defense services. It also equips the student with science of language,Indian philosophy, and discourse on Sanskrit literature.

PROGRAMME SPECIFIC OUTCOME

The specific insistence is on Sanskrit grammar, translation, and essay. Discourse course is of significance for researchers and specialized study of prominent writers like Kalidasa and Bhash. It also enables to explore phonetics, rhetorics, dramaturgy, and ancient modern poetry and job opportunities at national and international levels.

Sociology

Programme Outcomes

As College Level Discipline Sociology is Much better Subject for Youths. Personality Development, Behavior Development Such as a Good Part of Social Citizens.

Course Outcome

B.A. Part I

Paper I Principles of Sociology

Students will be able to
To understand the Discipline of Sociology and Society, the Emergence of Sociology as a Discipline.
Describe the Basic Concepts of Sociology.
Paper II Social Anthropology
Students will be able to
Understand the Discipline of Social Anthropology, the Emergence of Social Anthropology as a Discipline
Describe the Basic Concepts of Social Anthropology

B.A. Part II

Paper I Research Methodology

Students will be able to
Describe the Steps of Scientific Social Research
Understand the Different Research Designs Data collection tolls and data Analysis methods

Students will be able to

1. Describe Social Problems in India
2. Understand the Different Aspects of crime and Major Social Problems in Contemporary in India.

Students will be able to

1. Explain Classical Thinkers in Western Sociology and Indian Sociology.
2. Understand the Different Thought.
3. Critically Analysis the Work of Social Thinkers

Paper II Indian Society

Students will be able to

1. Explain Indian Society and Culture.
2. Understand the Different Components in Indian society
3. Understand Indian Demographic profile

Science Faculty

Botany

PROGRAM OUTCOMES

By the end of B.Sc. program in Botany, a student will:

1. Acquire basic knowledge of various branches of Botany
2. Inculcate interest and love of nature with its myriad life forms
3. Acquire basic skills in the observation and study of nature and awareness of the conservation of the biosphere.
4. Be exposed to the diversity among life forms and understand the unity behind diversity
5. Learn the different biological techniques.
6. Develop a scientific attitude which make her open minded, critical and curious
7. Develop ability for the application of the acquired knowledge in life and become self-reliant and self sufficient.
8. Develop skill in practical work, experiments, equipments and laboratory use along with collection and interpretation of biological materials and data.
9. Be aware of natural resources and environment and the importance of conserving it.
10. Be able to communicate effectively their views and ideas on different issues related to botany.
11. Successfully pursue their career objectives in advanced education, professional courses, scientific career, teaching career in the school systems or related career following graduation.

The graduate of this programme will be able to:

1. Understand the importance and scope of the discipline.
2. Acquire a firm foundation in every aspect of Botany.
3. Do lifelong learning due to attention drawn to the world of plants and introduction to the methodology of systematic academic enquiry
4. Scientifically identify and list out plants in their locality
5. Identify the role of different plants and their mode of survival in the environment
6. Develop skills to cultivate the economically beneficial plants and thus open opportunity for self- employment.
7. Develop love and respect for nature
8. Analyze the impact of deforestation on environment
9. Understand the importance of modern branches of science like Biotechnology for the economic benefits of agriculture.

B.Sc. Part I

BOTANY

PAPER I – ALGAE, LICHENS AND BRYOPHYTES

The students will be able to:

- understand about the general aspect of algae, their thallus structure, habitat, etc and by this unit students can know how to classify or identify different types of algae.
- understand the members of chlorophyta, charophyta and xanthophyta in detail and about classes of algae.
- know about the detail of red and brown algae also covers different economic values of algae,which is very important for humans because this student can get its value. This also tolds students about an important ecological component known as lichen, about its ecological importance and other values
- know about the general aspect of bryophytes as well as the details of Riccia and marchantia.
- Know the detail of anthoceros and Sphagnum as well as it tells students about the economic importance of bryophytes in different aspects, by which can be benefited.

Paper II: MYCOLOGY AND PLANT PATHOLOGY

- As food, Agaricus bisporus yeast is an important source of vitamin B and D, As medicines, Penicillin, Fungi in industry, baking industry and cheese industry, Fungi is used in enzyme production and Fungi's very important use is in genetics research. Neurospora crassa – very good material to study DNA synthesis.

Paper III: Pteridophyta, gymnosperm and paleobotany

- The geological time scale is an important tool used to portray the history of earth. a standard time line is used to describe the age of the rocks and fossils and the events that formed them we have come to know about the evolutionary trends that helps use in further research work.
- This helps us to understand the vegetative and reproductive morphology of certain pteridophyte which will help in research work.
- This provides us tremendous knowledge about the life cycle of some pteridophyte and about heterosory and evolutionary trends in pteridophytes.
- We have come to know about diversity evolution and economic importance of gymnosperm.
- This explains the life cycle of certain gymnosperm and helps us to know about their economic importance.

- The study of internal structure of certain algae is well understood. We also come to know about the economic importance of algae, lichens are well understood.
- We get a detailed knowledge about various plant diseases caused by fungi, bacteria and virus.
- The study of Bryophytes helps us to understand their thallus structure which is beneficial in research studies.
- The internal structure of stem, leaf, sporocarp, cone of certain Pteridophytes helps us to understand the range of stellar system and reproductive organs.

BSC PART -II

PAPER -I (Taxonomy and embryology of angiosperms):

- Provides an insight about herbarium which is collection of preserved plants. This unit throws light on nomenclature of angiosperms and various system of classification
- explain various families their vegetative, floral characteristics and their economic importance.
- Angiosperms. First Pollen falls on flowers stigma sperm cell and egg cell join to form a ovule. Formation of embryo sac endosperm and seed.

PAPER -II -PLANT ANATOMY AND EMBRYOLOGY OF ANGIOSPERMS

This course contains the

- study about plant meristems helps us to students the structure different types of tissue in plants
- study of plant internal structure of roots, stems and anatomy of plants allows a student to conceptually integrate organismal structure and function
- study of anatomy and different types of growth patterns helps to reveal the relationships between structure, function, taxonomy, ecology etc.
- study of economic botany helps students to understand the economic productivity because it is involved study of cereal crops and ideal growing technique this is also important to environmental protection
- due to study of medicinal plants and other commercially important plants helps students to student use this knowledge to apply in daily life can be utilized this knowledge for commercial production also.

Paper III -Cytogenetic, Plant Breeding, Evolution and Bio Statistics

- This unit helps to understand about cell which is structural and functional unit of life. Cellular components work together to carry out life functions and enable organisms to meet their basic needs.
- This unit gave insight about Mendel 's principle of inheritance and transmission of genetic traits present on chromosomes.
- This unit is useful for students to understand about D.N.A, R.N.A and Genes that has all the instructions that a living organism need to grow, reproduce and function.
- Plant breeding is a novel branch of botany in which students ensure food security by developing varieties which are higher yielding, disease resistance and adapted to different environment.
- This unit deals with the method for collection of data, presentation of data' analysis of data and making decision on basis of such analysis.
- This includes evolution which explains students how modern living thing have descended from ancient life forms.

BSC PART -II- PRACTICAL

- Purpose of various practical exercise is the develop curiosity about that subject
- due to these different practical exercise students know about different aspects of plant sciences
- critically evaluation of ideas and arguments by collection relevant information about the plants
- students will be able to apply the scientific method to questions in botany by formulating testable hypothesis.

B.SC. Part-III

Paper I- Ecology

Students will be able to understand plant communities and ecological adaptation in plants.

Learn about biodiversity and its conservation.

Understand bio remediation, global warming and climate change.

PAPER II: PLANT PHYSIOLOGY

In this unit, various rules of osmosis are explained, and this unit told about water absorption, water potential and transpiration, as well as different types of ingredients required for plants.

The second unit explains the various types of forests present in the hands and the common and unusual methods of photosynthesis, as well as the various influencing cars of the publication.

Third unit deals with whole procedure of respiration and factor affecting respiration and also told about fat metabolism.

This unit told about few important aspects of plant physiology such as plant growth hormones, dormancy, photoperiodism and vernalisation.

This last unit deals with enzymology and techniques as chromatography, centrifuge, ph meter and spectrophotometer.

PAPER III: MOLECULAR BIOLOGY AND BIOTECHNOLOGY

- Molecular Biology & Biotechnology is the recent branch of life sciences and by this student will know the basic gene concept and how a DNA carries all information about the life.
- NIF genes play an important role in agriculture productivity. (How yield can be increased by the use of NIF genes)
- Genetic Engineering: With genetic Engineering students can understand the process of vaccination.
- Students can design their organic farming by using natural insecticide (Bt-toxin).
- Students can prepare and use disease-free high-quality planting material and the rapid production of many uniform plants.
- Metabolites play an important role in immune system. Identification & analysis of these metabolites signal compounds and thus important for plant survival and reproductive fitness.

BSC PART -III - PRACTICAL

- Due to these different practical exercise students know about different aspects of plant sciences specially in this class about plant physiology, ecology and biotechnology.
- Critically evaluation of ideas and arguments by collection relevant information about the plants by ecology.
- Students will be able to apply the scientific method to questions in botany by formulating testable hypothesis.
- Students learn about different concepts and experiments about physiology and biotechnology can be work as a skill development in students.

M. Sc. (Botany)

Course Outcome

After the completion of this course students will be able to:

- Develop a conceptual understanding of principles and importance of Botany. Knowledge of fundamental topics provided in these classes, such as molecular cytogenetics, physiology and biochemistry, plant diversity, and application of statistics, would be beneficial to students. Modules on plant tissue culture, photochemistry, and analytical methods would assist them develop the abilities necessary for doing research.
- Learn how to use practical lab techniques to examine plant cell structure, reproduction, anatomy, and breeding practises for hybridization in depth. Uphold the highest standards of scientific quality in botanical research, placing a special focus on the function of plants. Develop, pick, and use trans disciplinary methodologies, resources, and current technologies. practising a subject with the ability to plan experiments, evaluate, and interpret data to come to a useful result.
- They would identify, formulate and analyze the complex problems with reaching a substantiated conclusion. Logical thinking with application of biological, physical and chemical sciences. Learning that develops analytical and integrative problem-solving approaches.
- Understand the issues of environmental contexts and sustainable development with respect to assessment, conservation and utilization of floral diversity
- Use pure culture and selective techniques to isolate fungi, plant pathogens, algae and identify them growing on media.
- estimate the number of floral components by using enumeration and suitable sampling and techniques.
- Use appropriate plant molecular techniques and use of instrumentation related to it.
- Practice safe laboratory procedures, using appropriate protective, biosafety and emergency procedures.
- Documentation and report writing on experimental protocols, results and conclusions, study tours and filed visits etc.
- Apply appropriate techniques for the qualitative and quantitative analysis of chemicals in laboratories and in industries.
- become familiar with the different branches of chemistry like analytical, organic, inorganic , physical, environmental, polymer and biochemistry Helps in understanding the causes of environmental pollution and can open up new methods for environmental pollution control.
- Develops analytical skills and problem solving skills requiring application of chemical principles, Acquires the ability to synthesise, separate and characterize compounds using laboratory and instrumentation techniques.

Programme Outcome

The aim of the program is to enhance students understanding in Biology And Diversity of Algae and Bryophytes, Microbiology, Mycology and Plant Pathology, Cytogenetic, Genetics and Plant Breeding Plant Ecology, Conservation and Evolution, Pteridophytes, Gymnosperms and Palaeobotany, Plant Developmental Biology, Cell and Molecular Biology, Plant Growth and Development, Skill Course Elective 1 Minor Research Project, Plant Tissue Culture And Genetic Engineering, Tools And Techniques In Plant Sciences, Minor Research Project.

Programme Specific Outcome

The graduates (PSO) of M.Sc. Can pursue career in following areas: Botany Food companies, Arboretum, Forest services, Biotechnology firms, Oil industry, Land Management agencies, Seed and Nursery Companies, Plant Explorer, Conservationist, Ecologist, Environment consultant, Horticulturist, Molecular Biologist, National parks, Educational institutions. Prepare the students for many competitive exams like RPSC, UPSC NET /SET GATE.

Chemistry

B. Sc. Chemistry

Program Outcome

Nature and extent of the B.Sc. Chemistry Programme:

Chemistry is referred to as the science that systematically studies the composition, properties, and reactivity of matter at atomic and molecular level. The scope of chemistry is very broad. The key areas of study of chemistry comprise Organic chemistry, Inorganic Chemistry and Physical Chemistry.   In addition, employability of B.Sc. Chemistry graduate is given due importance such that their core competency in the subject matter, both theoretical and practical, is ensure

Aims of Bachelor's degree programme in Chemistry:

The broad aims of bachelor's degree programme in Chemistry are:

1. understanding of key chemical concepts, principles and theories.
2. To develop students' ability and skill to acquire expertise over solving both theoretical and applied chemistry

problems.

1. 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.
2. To provide the latest subject matter, both theoretical as well as practical, such a way to foster their core competency and discovery learning.

Learning Course Outcome B.Sc. Part -I

Paper- I Inorganic Chemistry

On completion of this course, the learner shall be able to:

- Apply atomic theory and its evolution, predict quantum numbers, periodic properties, physical and chemical characteristics, periodicity of properties, Characterize bonding between atoms, molecules, interaction and energetics, hybridization and shapes of atomic, molecular orbitals, bond parameters, bond- distances and energies.
- Apply the fundamental principles of s and p-block elements and chemistry of noble gases, their chemical bonding and general chemical reactivity in subsequent courses of chemistry.

Paper- II Organic Chemistry

On completion of this course, the students will be able to:

- Explain basics of organic molecules, structure, bonding, reactivity and reaction mechanisms, aromatic compounds and automaticity, mechanism of aromatic reactions, Stereochemistry of organic molecules – conformation and configuration, asymmetric molecules and nomenclature.
- Mechanism of organic reactions (effect of nucleophile/leaving group, solvent), substitution vs. elimination.
- Understand preparation, properties, structure and applications of saturated hydrocarbons.

Paper- III Physical Chemistry

On completion of this course, the students will be able to:

- Analyse basic concepts of mathematics and computer application, physical properties of each state of matter and concept of liquids and colloids.
- Determination of lattice parameters of given salt, computational and calculation techniques.
- Explain chemical kinetics and chemistry in everyday life.

B.Sc. Part-I Practical

On completion this course, the students will be able to:

- Understand the principles of working with lab equipment's, and ability to properly use them.
- Process purification of important compounds.
- Analyse, separate and identify anions and cations from various groups.
- Understand basic safety symbols in chemistry lab

B.Sc. Part -II Paper

I Inorganic Chemistry

On completion of this course, the learner shall be able to:

- Acquire knowledge of characteristic of Lanthanides and Actinides, transition metal series with comparison, the properties of non -aqueous solutions theories of acids and bases, understanding coordination compounds, their structures and properties.
- Apply Chromatographic methods and preparation of chromatograms.
- Apply Werner's Theory and its experimental verification, demonstrate bonding theories including valence bond theory and

molecular orbital theory.

Paper II Organic Chemistry

On completion of this course, the students will be able to:

- Explain spectroscopic methods, understand the structure of organic compounds using UV, Visible and IR spectral data.
- Describe name reactions, uses of various reagents and the mechanism of their action.
- Explain the structure, synthesis, uses and properties of different classes of organic compounds like phenols amines, arenas, and carboxylic acids.

Paper III Physical Chemistry

On completion of this course, the students will be able to:

- Apply basic laws of thermodynamics, and thermochemistry
- Explain partial molar quantities and its attributes.
- Understand basic introduction of photo chemistry.
- Understand the concept of heat of reactions and use of equations in calculations of bond energy, enthalpy, etc.
- Understand the concept of phase rule.
- Use of thermochemical equations and thermodynamics for calculation of energy, chemical behaviour of solvent and solute, determination of transition temperature and heat of neutralisation.

B. Sc. Part-II Practical

On completion of this course, the students will be able to:

- Prepare standard solutions of various secondary standard salts.
- Calibrate lab equipment's like pipettes and burettes.
- Evaluate heat of neutralization.
- Determine transition temperature of some inorganic compounds
- Separate organic mixture containing two solid components by water and sodium carbonate methods.

B.Sc. Part -III

Paper I Inorganic Chemistry

On completion of this course, the students will be able to:

- Explain coordination compounds – its nomenclature, theories, d-orbital splitting in complexes, chelate.
- Apply crystal field theory on different geometries to correlate it with stability.
- Apply HSAB principle on stability of molecules.
- Elucidate structure and bonding of Inorganic polymers.
- Elaborate thermodynamic and kinetic stability of complexes, L-S coupling, describe bioinorganic molecules with special reference to Hemoglobin and Myoglobin, and understand toxicity of various metals and mechanism of metal-biological system interactions.
- Describe basic phenomenon of nuclear chemistry.

Paper II Organic Chemistry

On completion of this course, the students will be able to:

- Describe polynuclear hydrocarbons and their reactions.
- Analyse reaction mechanism of heterocyclic compounds, alkaloids and Terpenes
- Explain, classification, structure, reaction mechanism of synthetic drugs and dyes.
- Understand the structure, mechanism of reactions of selected heterocyclic compounds.
- Elucidate   applications of heterocyclic compounds in pharmaceutics/drugs and the mechanism of action's, structure of

carbohydrate, amino acids, proteins and nucleic acids.

III Physical Chemistry

On completion this course, the students will be able to:

- Explain quantum mechanics and its uses.
- Analyze various types of spectroscopic methods to identify molecular structure.
- Understand the basics of chemical kinetics: determination of order, molecularity, and understanding theories of reaction rates, determination of rate of opposing/parallel/chain reactions with suitable examples, application of steady state kinetics, Steady-state approximation.

B. Sc. Part-III Practical

On completion of this course, the students will be able to:

- Synthesize various transition metal complexes.
- Handle instruments like colorimeter and potentiometer and conduct meter.
- Understand concept of chromatography (Paper Chromatography) by separation of organic compounds.

PHYSICS

COURSE OUTCOME

B.Sc. Part- I

PAPER-I FRAME OF REFERENCE, MECHANICS AND OSCILLATIONS

After completing the Course student will be able to –

- Define Frame of reference and can differentiate between inertial and non-inertial frame of reference, Apply Galilean transformation and fictitious force, the Coriolis force and Centrifugal force in rotating frame of reference.
- Describe Michelson Morley experiment and its failure to prove the existence of either.
- Define the postulates of special theory of relativity
- Deduce and apply the Lorentz transformation
- Explain and demonstrate the length contraction and time dilations using space-time model
- Apply velocity transformation and can deduce the formula of variation of mass with velocity.
- Define motion under central force.
- Describe Kepler's law and can relate it with conservation laws
- Analyze the gravitational laws using central force motion and relate the concept of field.
- Derive the Gauss and Poisson equations
- Explain the concepts of centre of mass
- Elaborate the motion of rockets using the learnt concepts
- Apply the momentum and energy conservation in elastic and non-elastic collisions.
- Define rigid body motion, rotational motion and moment of inertia.
- Derive and apply the Euler equations
- Define the potential well and periodic oscillations
- Analyze the differential equations of free and damped oscillations
- Apply the concepts of oscillation in various conditions –spring mass, pendulum, LC circuit etc.
- Apply the concepts of superposition in two SHMs.

PAPER-II- MATHEMATICAL BACKGROUND, PROPERTIES OF MATTER AND ELECTROMAGNETIC WAVES

After completing the course student will be able to -

- Apply the concepts of dot product and cross product up to three vectors, the geometrical meaning of gradient, curl and divergence, Conversion between surface and volume integral, curvilinear coordinates, stokes and green theorem.
- Define Elasticity.
- Describe the Young modulus, bulk modulus and modulus of rigidity.
- Deduce relation between different elastic constant
- Apply the concepts in bending of beam, Cantilever, etc.
- Define Electromagnetic induction
- Explain faraday's law and its different forms
- Apply the concepts of Self and Mutual Inductance.
- Describe the Maxwell's displacement current.
- Describe the plane electromagnetic waves
- Analyze wave equations for different polarized waves.
- Deduce and apply the boundary conditions for B, E, H and D.
- Explain and demonstrate the Total internal reflection

After completing the course student will be able to -

- Define Coulomb's law and its vector form.
- Describe the concepts of multipoles
- Explain the concepts of field and potential.
- Calculate the torque on dipole, electrostatic energy of sphere etc.
- Define dielectrics, capacitor and dielectric constants
- Define Polarization and polarization vector Atomic and molecular polarisability, Displacement vector D,
- Explain molecular interpretation of Claussius Mosotti equation
- Define Steady current, Current density J,
- Deduce and explain the physical significance of continuity equation, Analyze the charging and discharging of condenser through resistance, Apply the charging-discharging concepts for determination of high resistance by leakage method and analyze the rise and decay of current in LR and CR circuits.
- Define Decay constant
- Analyze transients in LCR circuits, AC circuits. Apply complex number and their applications in solving AC circuit, Define and calculate force on moving charge.
- Define magnetic field, Apply concepts of force and torque in different cases.
- Define Biot and Savart's law, Apply Bio-savart laws in different cases, Apply the Electric force and magnetic force to find the path of charge particles moving in respective fields, Apply the concept to explain the functioning of CRO.
- Analyze mass spectrograph, velocity selector using concepts taught in this unit.

B.Sc. Part -II

Paper-I SATISTICAL PHYSICS AND THERMODYNAMICS

After completing the course student will be able to -

- Demonstrate the phase space for different STATISTICAL SYSTEM.
- Define micro and macro states
- Discuss the statistical basis of thermodynamics, Define Probability and thermodynamic probability, Explain the principle of equal a priori probabilities.
- Define Constraints, accessible and inaccessible states, Apply concepts in different systems, Create link between micro and macroscopic physics, Relate Probability and entropy
- Interpret statistical second law of thermodynamics, State and apply Boltzmann canonical distribution law.
- Deduce law of Equipartition of energy, Transits the concepts to quantum statistics, Apply the concepts to 1-D and 3-D harmonic oscillator, Analyse and compare M.B., Bose-Einstein, and Fermi-Dirac statistics.
- Define the laws of thermodynamics, Calculate the work done by and on the system, Differentiate state and path function
- Define and differentiate reversible and irreversible changes, Explain Carnot cycle and its efficiency, Apply Carnot theorem to derive the second law of thermodynamics, Elaborate Different versions of the second law, Define the thermodynamic scale of temperature; its identity with the perfect gas scale.
- Define Third law of thermodynamics, Define Thermodynamic variables, Differentiate extensive and intensive variable.
- Derive Maxwell's general relations, Apply Maxwell's equations in various cases.
- Define Stefan-Boltzmann law of radiation.
- Analyze Spectral distribution of blackbody radiation.
- Define and explain Wien's displacement law, Rayleigh-Jean's law,

- Explain the concept of ultraviolet catastrophe
- Define Planck's quantum postulates,
- Interpret the behaviour of specific heats of gases and solids at different temperature

Paper- II- WAVES, ACOUSTICS AND KINETIC THEORY OF GASES

After completing the course student will be able to -

- Define Ideal Gas: Kinetic model, Derive of Boyle's law, Define the temperature at molecular level,
- Estimate of r.m.s speeds of molecules, Explain Brownian motion, estimate of the Avogadro number, Define Equipartition of energy.
- Define and calculate the specific heat of gas, Analyze adiabatic expansion of an ideal gas, Apply the concepts to atmospheric physics, Explain Transport phenomena in gases, Explain the concept of real gas, Differentiate the ideal and real gas, Plot P-V curve and analyze it.
- Define and explain the Joule Thomson effect, Explain the process of Liquification of gases, State the Maxwell postulates, Deduce the Maxwell velocity distribution equation, Plot graphs for distribution, apply the distribution laws for statistical analysis.
- Explain and apply the concept of acoustics of buildings
- Define the waves
- Derive the equation of wave
- Apply the wave equation to find the velocity of wave
- Explain the gravity waves
- Apply the superposition principle to explain the standing waves
- Explain the formation of Chaldani's figures.
- Explain the application of ultrasonic waves.
- Explain the working of human ears
- Analyze the sound loudness using Bel and decibel units.
- Analyze the sound of different musical instrument and explain the formation of music from them
- Measure the frequency and velocity of wave by different experiments
- Apply the concepts to explain working of SONAR and RADAR.

Paper-III- OPTICS

After completing the course student will be able to -

- Define and apply the Fermat principle
- Explain and apply the concepts of image formation by multiple and thick lens systems
- Explain the different aberration in image formation
- Apply different techniques to remove the aberrations
- Define interference in waves
- Create the condition for interference in light
- Analyze the interference in different optical systems
- Define the Fresnel and Fraunhofer diffraction and distinguish them.
- Apply the Fresnel diffraction concepts to explain the light's behaviour in different conditions
- Analyze the gratings using Fraunhofer concepts
- Explain the different process at atomic level for light emission
- Explain the conditions of lasing action
- Elaborate the different laser systems
- Explain the holography and its applications in different fields

PAPER -I- Quantum Mechanics, Atomic and Molecular Physics

After Completing course student will be able to

- Define Blackbody
- Describe Blackbody spectrum
- Explain Plank's Radiation Law, Photoelectric effect and Compton effect
- Analyse and briefly explain Diffraction and interference of particles, Origin of Quantum Define Uncertainly principle and justify it.
- Apply the concept of uncertainty in various cases such as diffraction at a single slit, particle in a box and its applications (i) Nonexistence of electron in nucleus, (ii) Ground state energy of H-atom (iii) Ground slate energy of harmonic oscillator.
- Define and analyse Schrodinger equation- Time dependent and lime independent form.
- Explain significance of the wave function & its interpretation.
- Define probability current density and gives its physical significance
- Apply operators in quantum mechanics,
- Define fundamental postulates of quantum mechanics, Eigen function and Eigen value, degeneracy. orthogonally of Eigen functions' commutation relations.
- Explain Ehrenfest theorem, concept of group and phase velocities, wave packet.
- Apply time independent Schrodinger equation and stationary state solution.
- Solve the problems like -particle in 1-D box and 3-D box
- Potential step and rectangular potential barrier. Calculation of reflection and transmission coefficient.
- Apply barrier problem for alpha decay (tunnel effect),
- Solve square well potential problem
- Apply the Schrodinger equation to 1-D harmonic oscillator
- Explain the hydrogen atom on the basis of Schrodinger equation.
- Explain the Hydrogen spectrum
- Analyze normal spectral lines, fine and hyperfine line by using spin of electron, vibration of bonding rotation of molecules
- Apply Raman Effect to find the molecular structure

Paper-II- Nuclear and Solid-State Physics

After Completing course student will be able to

- Explain the results of Rutherford theory of alpha particle scattering,
- Define and analyze the properties of nucleus- Quadrupole moment (Q.M)
- Determine the shape of nucleus using O.M.
- Explain and calculate the nuclear spin.
- Analyze the nuclear potential and elaborate properties of nuclear forces.
- Apply semiempirical mass formula
- Explain nuclear fission and fusion using nuclear liquid drop model
- Apply nuclear fission concepts to explain the nuclear reactor
- Explain the formation of energy in sun using nuclear fission
- Analyze the concepts to explain the working of particle detector and counter.
- Define lattice, Bravais crystal and miller indices
- Apply X-ray diffraction method to find the crystal structure
- Use the concept of phonon to explain the specific heat of solid
- Explain the conductivity of solid by understanding crystal structure and different theorems

After Completing course student will be able to

- Define Norton, thevenin etc. theorem
- Apply the theorem to analyze the circuits
- Explain the mechanism of formation of conductor and semiconductor
- Define semiconductor, holes
- Explain working of P-N junction
- Explain working of different semiconducting devices
- Apply semiconductor for rectification process
- Explain working of Transistor
- Elaborate the concepts to explain the different biasing of transistor
- Explain the Amplifier
- Apply the Amplifier in different mathematical process
- Define the Feedback in amplifiers
- Explain the oscillators on the basis of feedback in amplifier

Mathematics B.Sc.

(Mathematics) Programme Outcome

- Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.
- Ability to analyse a problem, identify and which may be appropriate to its solution.
- Enhancing students' overall development and xz solving skills, creative talent and power of communication necessary for

  various kinds of employment.

- Ability to pursue advanced studies and research in pure and applied mathematical science.

Programme Specific Outcome of B.Sc. Mathematics

- Think in a critical manner.
- Formulate and develop mathematical arguments in a logical manner.

Course Outcomes

B.Sc.– Part I

Paper-I – Algebra

The students will be able to

- Learn to solve system of linear equation and its application, solve mastics, determinate, inverse metrics and rank of metrics and to find roots of cubic, biquadratic and carden and ferreris method, to

find graphs, roots and primes integer, the significations of the notation of a group, subgroup, normal subgroup, and homomorphism.

Paper- II- Calculus

The students will be able to

- Describe the concepts and applications of derivative and higher order derivatives, partial derivatives, basic concepts of differentiation and integration, Introduction to curve, pedal equation and maximum or minimum, concept of asymptotes and envelopes and beta and gamma function, Quadrature ,volume, area of surface revolution, double and triple integral.

Paper- III- Vector Calculus

The students will be able to

- Student will able to Acquire the basic knowledge of vector differentiation and vector integration, Compute the curl, gradient and the divergence of vector and Evaluate line, surface, double and triple integral and use these integrals to verify the seminal integral theorems (Green's theorem in the plane, Gauss' divergence theorem and Stokes' theorem)
- Students will be able to Find equation in various form sphere, cones, cylinder & central coincides and its applications.

B.Sc.– Part II
Paper- I- Higher Calculus

The students will be able to

- Gain Knowledge of fundamental concepts of real numbers, value of the limit of a function at a point, sequence and series, continuous functions, differentiable functions and related theorems and problem solving on MVT, Rolls, langrage's, Taylors and maclaurins theorem.

Paper- II- Differential Equation

After Completing course student will be able to

- Understand the order, degree and various standard forms of differential equations.
- Determine solutions to first order linear differential equations and solutions to first order exact differential equations.
- Determine solutions to second order linear homogeneous differential equations with constant coefficient.
- Obtain power series solutions of differential equations and identify and obtain the solution of Clairaut's equation.
- Acquire the idea of Monges method for solving the second order linear partial differential equations.

The students will be able to

- Explain basic idea of equilibrium condition, type of forces, geometry of the motion of particle in plane curve, i.e., position, velocity, and acceleration and how those quantities are related through calculus, Newton's lows of motion and examines their application to wide variety of problems, forces and friction.

B.Sc.– Part III

Paper – I - Advanced Algebra

After Completing course student will be able to

- define ring and subrings, ideals and concept related to ideal, integral domains and fields.
- Introduction to vector space and subspace, the study of systems of Linear equations, matrix algebra, vector spaces, eigenvalues and eigenvectors, Orthogonally and Diagonalization.

Paper - II – Analysis

The students will be able to

- Compute sums, products, quotients, conjugate, modulus, and argument of complex numbers · Define and analyse limits and continuity for complex functions as well as consequences of continuity. Students will be able to Conceive the concepts of analytic functions and will be familiar with the elementary complex functions, differentiability and power series expansion of analytic functions.
- Understand the basic methods of complex integration and its application in contour integration.

III- Numerical Analysis & Optimization Techniques

The students will be able to

- Students will be able to Understand the mathematical tools that are needed to solve optimization problems.
- Formulate the nonlinear programming models.
- Use some solution methods for solving the nonlinear optimization problems.
- Examine the appropriate numerical differentiation and integration methods to solve problem.

Zoology

BSc. Zoology Program Outcomes

The department of Zoology as a course subject for undergraduate students gain knowledge and skill in the fundamentals of animal sciences, understands the complex interactions among various living organisms and analyze complex interactions among the various animals of different phyla their distribution and their relationship with the environment.

Program Specific Outcomes

1. Aware students about knowledge and skills in the fundamentals and systematics of Animal Kingdom.

2. Gain knowledge of anatomical structure and various metabolic functions of organs.

3. Understand various physiological processes at molecular level of animals from different phyla

4. Awareness about environment and its conservation processes, pollution control and its importance.

5. Gain knowledge for protection of vulnerable and endangered species.

6. Understand about various concepts of genetics and its importance in social well being

7. Information and skill advanced biological techniques for experimental purpose.

8. Develop empathy and love towards the animals.

Course Outcome

B Sc Part I Paper I- Taxonomy, Diversity and Functional Anatomy of Lower Non-Chordata

1. Ability to love and understand the fascinating world of Invertebrates

2. Get a concrete idea of the evolution, hierarchy and classification of Invertebrate phyla

3. Understand the basics of systematics by learning the diagnostic and general characters of various groups

4. They will acquire knowledge about acoelomate and pseudocoelomate parasites their lifecycles epidemiology, pathology, diagnosis, symptoms and treatment

B Sc Part I Paper II- Taxonomy, Diversity and Functional Anatomy of Higher Non-Chordata

1. Imparts knowledge regarding the various Invertebrate species and the regulatory processes to safe guard them

2. With the study of this paper students gain knowledge in the area of responses to systematic position, general organization and affinities of Annelida to Echinodermata

B Sc Part I Paper III- Cell Biology, Biochemistry and Microbiology

1. Students will understand structure, positions and functions of plasma membrane and all cellular organelles in details.

2. They will acquire knowledge about chromosomes and cell divisions, mitosis and meiosis

3. Students will gain knowledge about Catabolism and Anabolism

4. Students will understand about various bacteria and viruses and diseases spread by them their diagnosis, symptoms and treatment

5. They will study about AIDS, SARS, secondary diseases, symptoms, diagnosis, treatment and prevention

B Sc Part I Practical

1. Dissection of different systems of Invertebrate animals are to be studied such as Prawn, Pila and Unio

2. Permanent slides are prepared from different organs to study the details of their structures prepared by students

3. Prepared slides in this part to understand the structure and arrangement of different muscular regions

4. Study of Invertebrate specimens identified and classified the specimens which are present in the departmental museum

5. Detect carbohydrate, protein and fat in given food material using biochemical test

6. Identify the phases of cell division

7. They will come to know about cell membrane permeability

B Sc Part II Paper I- Chordata and Evolution

1. Students will understand the classification, structure, function and biology of chordates of different taxonomic classes

2. They will acquire knowledge about comparison of the following organ systems of vertebrates with special reference to evolutionary aspects Scoliodon, Rana, Uromastix, Columba, Oryctolagus. Study about integument, Alimentary canal, heart and evolution of aortic arches, respiratory system, urinogenital system

3. Students will have knowledge of evolutionary thought by Lamarckism, Darwinism, Origin of Life, Evidences of organic evolution, Genetic basis of evolution, Hardy Wein Berg's Law, natural selection, isolation mechanism, variation, adaptation, with specific reference to flight adaptation, aquatic adaptation and desert adaptations

4. They will have knowledge of geological time scale, fossils, dating of fossils, principle Zoo geographical regions of the earth and their mammalian fauna, extinct forms: Archaeopteryx, Dinosaurs, Evolution of horse

B Sc Part II Paper II- Mammalian Physiology and Immunology

1. Students will know the physiology of digestion, respiration, circulation, excretion.

2. Understand the functions of important physiological systems including the cardio, respiratory, renal, reproductive and metabolic systems

3. Understand how these separate systems interact to yield integrated physiological responses

4. They will gain knowledge about nerve impulse and muscle contraction

5. Imparts in depth knowledge of tissues, cells, molecules involved in host defense mechanisms

6. Understanding of types of immunity

7. Interaction of antigens antibodies complements other immune components

8. Understanding the immune mechanisms in disease control, vaccination, process of immune interactions

B Sc Part II Paper III- Developmental Biology

Upon completion of this course the student will be able to:

1. Discuss basic concepts and develop knowledge on major developing processes

2. Explain the development of different organs and organ systems

3. Analyze the mechanisms regulating developing processes

4. Evaluate the different technologies adopted in assisted reproduction

5. Apply the concepts in new area of developmental biology

B Sc Part II Practical

1. Dissection of different systems of Scolidon

2. Permanent slides are prepared from different organs to study the details of their structures prepared by students

3. Prepared slides in this part to understand the structure and arrangement of different muscular regions

4. Count total leucocytes and RBC from blood samples

5. Prepare temporary slide of various stages of chick embryo to identify different stages

6. Identify adaptations in animals

7. Explain the stages of human evolution

8. Explain the evidences of evolution

9. Estimation of Haematocrit value, total haemoglobin, blood coagulation time experiment, blood urea estimation, estimation of blood glucose level.

B Sc Part III Paper I- Mammalian Neuroendocrinology and Behaviour

1. This paper gives idea about the glands which work inside the body and secretes a chemical called hormone. How it is classified, how it works and the regulation of these hormones are discussed here. It gives clear picture of its functions

2. Apply the knowledge of endocrinology to understand hormone related disorders

3. Explain the secretion and transportation of hormones to maintain homeostasis

4. Students will have knowledge of ovary and placenta, ovarian cycles and their neuroendocrine control, endocrinology of ovulation, implantation, parturition and lactation. Testis and testicular cycles and their hormonal control

5. Pheromones and their role in reproductive function and behaviour

6. Understand the concepts of Ethology, methods of studying behaviour and a brief idea about pheromones, biological clocks, orientation

7. Understand the concept of social behaviour and social organization of Black Buck and rhesus Monkey. Social communications among animals.

8. Migration of fishes and cryo preservations

B Sc Part III Paper II- Genetics and Biotechnology

1. They will gain knowledge of Mendelian principles, interaction of genes, linkage and crossing over, human genetics, blood grouping

2. On completion of this course students are able to understand about the genetic material (Nucleic acids) and DNA replication

3. Understand about various types of RNA and process of Transcription and Translation

4. Understand the genetic code, Mendelism and multiple Allelism

5. Understand the concept of gene and gene interaction and sex-linked inheritance

6. Understand the terms Mutation, Eugenics, Gene Regulation, Cytoplasmic inheritance

7. They will come to know elementary idea about genetic engineering, gene cloning and recombinant DNA technology

8. Students will learn microbes in Medicines, Antibiotics, Vaccine, Antibodies, Antigens

9. They will learn about environmental biotechnology: use of microorganisms in metal and petroleum recovery, pest control, waste treatment, processing of industrial waste

10. Use of food and drink biotechnology

11. Monoclonal antibodies and their applications

B Sc Part III Paper III- Animal Ecology and Biostatistics

1. The students will be able to identify and critically evaluate their own belief, values and actions in relation to professional and societal standards of ethics and its impact on ecosystem and biosphere due to the dynamics in population

2. The learner will be able to link the intricacies of food chain and food web and link it with human life for its betterment and for non-exploitation of the biotic and abiotic components

3. To study population, community ecosystem, zoo geographical distribution of animals, wildlife conservation, pollution, etc.

4. Students will have knowledge of fresh water lentic habitat, lotic habitat, deep sea fauna, marine habitat, estuarine habitat; their fauna and adaptations

5. They will learn about concept of ecosystem. Trophic levels – food chain, food web and energy flow in an ecosystem

6. Biostatistics teaches them to use the best data analysis methods in their research projects

7. Students will gain knowledge about statistical methods of measure of central tendencies, probability

8. Learns the problem-solving methods

B Sc Part III Practical

1. Study of museum specimen, identified and classified the specimen of phylum Amphibia, Reptiles, Birds and Mammals

2. They gain knowledge from the prepared slides, the structure and arrangement of different cells in endocrine glands

3. Measurement of various parameters of water such as pH, CO_2, O_2, Cl, salinity, alkalinity and acidity

4. They will learn about antennal grooming in cockroach, study of photo tactic response of Tribolium, response of Paramecium towards stimulus.

5. They will understand about construction of frequency tables, histogram, polygons, pie charts, mean, median, mode, t-test and Chi square test.

M.Sc. Zoology

Course Outcomes

The course provides knowledge related to Taxonomy, Phylogeny, Structure & Function in Invertebrates, Biological Chemistry, Immunology and Physiology, Molecular Biology, Cytogenetics, Techniques in Biology, Evolution, Statistical methods and Computer Application in Biology.

Programme Outcomes

Detailed account of Chordata, origin and evolution, Developmental biology, Animal ecology and Ethology. There is a wide spectrum of job opportunities like being a College and School teacher, Zoologist, Research Scientist, Conservationist, Environmental consultant, Herpetologist, Wildlife educator, Agriculture, Sericulture,

PROGRAMME SPECIFIC OUTCOME

Specific Programmes offered include Cell Biology dealing with cell types, membrane structure, Structural organization, cell division cell cycle, cancer, cell and tissue culture, fixation and staining, immune system; Environmental biology which incorporates study related to earth and biosphere, environmental physiology, ecosystems, Taiga and Tundra, major biogeographic regions, management of environment, resources, environmental health, legislation, environmental toxicology, methodology for environmental analysis; Entomology which deals with the study of insects, insect fossils, evolution, classification, functional organization, insect embryology, pests, management strategies, beneficial insects, vectors of diseases, ecology and social life in insects.

Commerce Faculty

ABST

B.COM [ABST] PROGRAM OUTCOME

1: After completing three years for Bachelors in Commerce (B.Com.) program, students would gain a thorough grounding in the fundamentals of Commerce and Finance. Especially for the students it will give the scope for self-employment as well as for getting good jobs of the competitive market.

2: The commerce and finance focused curriculum offers a number of specializations and practical exposures which would equip the student to face the modern-day challenges in commerce and business.

3: Learners will be able to prove proficiency with the ability to engage in competitive exams like CA, CS, ICWA and other courses.

Program Specific Outcome / Course Outcome:

B.Com Part I

Paper-I

1. **Financial Accounting:** After completing this course student will be able to have an insight into the basics of Accounting Concepts and Principles to have the foot hold in Accounts. Preparing accounting information for planning and control and for the evaluation of finance. Students will be familiarized with the concept of Branch account and its system and to understand the Scope of departmental accounting. student will be able to proper accounts of any organization.

Paper- II

1. **Business Statistics:** After completing this course students will be able to acquire new skills on the application of statistical tools and techniques in Business decision-making. Student will be familiarizing with the concept of statistics. This course will support student to analysis statistical research.

B.Com Part II

Paper-I

1. **Income Tax (B.COM II):** Students will be able to demonstrate progressive learning of various tax issues and tax forms related to individuals. By this student will learn basic concepts in Income-Tax. To help them to apply the provisions and complete incomes under various heads. It helps to build an idea about income of an individual and its tax. It helps students to understand provisions of tax for individual, firm and HUF.

Paper- II

1. **Cost Accounting (B.COM II):** It will make students familiarize with the basic concepts of cost and various methods and techniques of costing. Aimed to familiarize the concept of cost accounting. Helps to gather knowledge on preparation of cost sheet in its practical point of view. it facilitates the idea and meaning of material control with pricing methods. It will support student to calculate the cost of any project.

B.Com Part III

Paper-I

1. **Corporate Accounting (B.COM III):** After completing this course students will be able to understand and appreciate the Provisions of the companies act 2013. It will give them an exposure to calculate the value of Goodwill and shares. Students can get an idea about internal reconstruction.

Paper- II

1. **Taxation (GST And Audit) (B.COM III):** The learning Goods and Services Tax (GST) enables the commerce students and the business community to ease interaction with GST authorities. Especially for the students it will give the scope for self- employment as well as for getting

good jobs of the competitive market. To enable the students to learn the concepts indirect tax and GST from the pre-GST period to post- GST period.

Business Management

Course outcome

Business Management

B.Com. Part-I

Paper-I Principles of management

After the completion of this course students will be able to:

- **Evaluate** the global content for taking managerial actions of planning, organizing, directing and controlling.
- **Assess** managerial practices and choices relative to ethical principles and standards.
- **Apply** their knowledge into management practices.
- **Specify** how the managerial functions can be executed in a variety of circumstances and with different type of people/employees.

Paper-II Business law

After the completion of this course students will be able to:

- **Define** various important terminologies of the different acts of Business Law like The Indian contract Act, The Sale of goods Act, Consumer Protection Act etc.
- **Apply** the knowledge at the time of making an agreement or contract.
- **Demonstrate** knowledge of basic business or commercial law.
- **Identify** the contract remedies and transactions involving the sale of goods.

B.Com. Part -II

Paper-I-Company Law

After the completion of this course students will be able to:

- **Describe** the company and its types, management and various provisions regarding operation of company.
- **Plan** to incorporate a company according to requirement.
- **Demonstrate** knowledge of companies act while employed in a company.
- **Predict** various jobs opportunities in corporate sector.

After the completion of this course students will be able to:

- **Design** their marketing management career.
- **Analyze** business environment with different aspects like Economic, Social, Ethical, and behavioral etc.
- **Select** a new market opportunity.
- **Apply** the knowledge concepts to face various challenges and issues of marketing in present era.

B.Com. Part-III

Paper-I Insurance

After the completion of this course students will be able to:

- **Define** the life and general insurance and distinguish between the two.
- **Analyze** current insurance plans with investment point of view.
- **Demonstrate** knowledge of insurance contracts and various provisions.
- **Develop** skills to facilitate insurance product cost, pricing, marketing and distribution.

Paper –II Industrial law

After the completion of this course students will be able to:

- **Explain** the different types of terminologies under various industrial acts.
- **Discuss** different types of health and welfare provisions of workers.
- **Outline** the important causes and impact of industrial disputes.
- **Prepare** a healthy environment in their workplace to establish good Industrial relations.
- **Elaborate** industrial dispute settlement procedure.

EAFM
B.Com. Part I
PAPER- I: BUSINESS ECONOMICS

Students completing this course will be able to:

- Explain the role of business economics in Business decisions and business forecasting, basic Economic Problem with various Concepts of National Income.
- Analyze price and output determination under different market structure along with the concept of revenue and cost.
- Evaluate the consumer equilibrium and producer's equilibrium
- Discuss theories of Rent, Wages, Interest and Profit.

Students completing this course will be able to:

- Discuss the Factors Affecting Economic Environment, Indian Economy, Impact of Economic Reforms on Indian Economy, Major Problems of Indian Economy, Economic Growth and Development, Role of Agriculture in Indian Economy, World Trade Organization and Indian Agriculture
- Explain the importance and objectives of Economic Planning, Agricultural Credit, Agricultural Productivity in India, New Agricultural Strategy and Green Revolution, Basic characteristics of Economy of Rajasthan, Role of Public Sector in India and its Problems, Dairy Development Programme and Tourism Development in Rajasthan, Constraints in Economic Development of Rajasthan and Remedies.
- Outline the Main Features of Indian Planning with Special Reference to Five Year Plans World Trade Organization and Indian Agriculture, Small Scale Industries and Handicrafts.
- Demonstrate the problems of Unemployment, Poverty and Disparity of Income and Wealth, Entrepreneurship & Entrepreneur, Role of Multinational Corporations in Indian Economy.

B. Com. Part II

PAPER-I : FINANCIAL MANAGEMENT

Students completing this course will be able to:

- Explain Functions of Chief Financial Officer (CFO), Financial Analysis and Balance Sheet, Techniques of Financial Analysis, Preparation of Statement of Changes in Working Capital, Preparation of Cash Flow Statement, Dividend Models and Their Relevance.
- Discuss Significance of Ratio Analysis, types of Ratios, Fund Flow Analysis, Working Capital Management, Cost-Volume- Profit Analysis, Factors affecting Inventory Level and Techniques of Inventory Control, Factors affecting Dividend Policy.
- Outline the Difference between Fund Flow Statement and Cash Flow Statement, Financial Planning and Forecasting, Concept of the Cost, Factors affecting Capital Budgeting

PAPER -II: BANKING & FINANCIAL SYSTEM

Students completing this course will be able to:

- Discuss the Type of Money, Value of Money, Quantity Theory of Money, Fisher, Cambridge & Keynes Approach, Importance of Money Market, Structure, Constituents, Instruments, Characteristics, Sources of Difference in Rates of Interest, Importance of Cash less Economy, Importance and challenges in Present Indian Economy
- Explain Recent Trends in Indian Money Market, Inflation and Deflation, Monetary Policy and Techniques of Credit Control, Fiscal Policy, Meaning of core & Internet Banking and their types, Basics of Electronic Data interchange (EDI).
- Outline the Main Components of Financial System, Recent Trends in Indian Capital Market, Banking and Financial System Reforms, RBI Functions, Credit Policy in Present Setting and its Limitations.

B.Com. Part III

PAPER – I BUSINESS BUDGETING

Students completing this course will be able to:

- Discuss Business Budgets and Budgeting: Preparation of budgets, budget co-ordination. Essentials of an effective Budgeting, Forms of Cash Budget, Forecasting, Steps in the preparation of Performance Budgets, Standard Costing, Analysis of Variance.
- Explain Analysis of the current budget of the Govt. of India and Rajasthan, Essentials of Business Forecasting, Risk Analysis in Capital Budgeting.

- Outlines of Zero-Base Budgeting, Reporting to Management and Information system.

PAPER - II: INTERNATIONAL TRADE

Students completing this course will be able to:

- Explain Importance of International Trade, Problems of International Trade, Balance of Trade and Balance of Payments, Foreign Aid to India, Patents, Determination of Foreign Exchange Rate, Exchange Control in India, Role of FEMA and RBI in Foreign Exchange System.
- Discuss World Trade Organisation, GATT, Uruguay Round, World Trade Organization and its Objectives, Functions, WTO and India.
- Outline of GATS, TRIPs, TRIM, UNCTAD, EXIM Bank of India, ECGC of India.

1. BECHLOR OF ARTS (B.A.) 400 seats in 04 Sections

2. BECHLOR OF SCIENCE (B.Sc.)- Biology 88 Seats

3. BECHLOR OF SCIENCE (B.Sc.) - Maths 88 Seats

4. BECHLOR OF COMMERCE (B.Com.) 100 Seats

Maa Jalpa Devi Government College,Taranagar (Churu)

Programme and Course Outcomes

S.NO	PROGRAMMECODE	PROGRAMME NAME	DISCIPLINE	COURSEOUTCOME	PROGRAMMEOUTCOME	PROGRAMMESPECIFICOUTCUM
1.	3-A3P	B.A.- Bachelor of Arts	Arts	The B.A programme is a combination of three elective courses opted over a wide range. Each course has been designed keeping in mind knowledge, skills, human values and social issues of relevance.	The B.A programme has been designed with the objective of imparting the best of subject knowledge along with basic computer knowledge and language competency.	It in stils critical thinking, effective communication and social interaction. The insistence is on extensive knowledge to fight competitive exams and pursue higher studies. The curriculum design emphasizes human values and subject competence.
					The programme	By the end of the programme learners get theoretical and practical exposure in the
6.	103-AGEOF Geography	M.A.-Master of Arts	Geography	The number of courses Across this programme in geography equips the Student with all aspects of physical, cultural, social Environmental and tourism geography.	The master's programme in Geography covers an extensive Area of Structural& Dynamic geomorphology, Economic Geography, Geography of Environment, Bio-geography, Agriculture Geography, Cultural Geography, Political Geography and Industrial Geography. A weekly seminar for Final year students provides exposure in Laboratory work, mapwork, Test and surveying.	The programme specific outcomes are of Immensehelpto students and opens up Opportunities for Urban Geography and planning , Regional Planning & Development, and also in the field of Tourism with the help of courses like Geography of Tourism, Geography of Population & Settlement and Remote sensing& G.I.S.
				The student can become a Researcher, Forester, Mycologist, Plant biochemist, Conservationist, Molecular biologist	As an outcome of this programme, the student learns about microbiology, viruses, phycology, phytoplasma mycology and plant pathology	The student opting for Plant Pathology is exposed to learning related to Host Pathogen interaction, Histopathology, fungi,

| 7. | 112-BOTF | M.Sc.-Master of Science | Botany | ...College and School including fungal, bacterial teacher etc. Plant and viral diseases; biotechnology an important area of specialization contributes towards gaining knowledge of micropropagation, embryogenesis, hybridization, tissue culture, recombinant technology, gene transfer, blotting techniques and the role of biotechnology in Society | those who study Plant ecology gain information about environment, ecosystem, natural resources and pollution, Desert biomes with special reference to Rajasthan; Plant Physiology lays emphasis on the study of carbohydrates, protein, coumarins & lignins, saponins and saponogenins, tools and techniques, plant growth regulators, photophysiology and stress physiology; |

Note: The middle columns also contain: Bryology, Pteridology and Gymnosperms, ecology, phytogeography, ethnobotany and economic botany, biochemistry and plant physiology including growth regulators, taxonomy, morphology, anatomy and embryology of Angiosperms, molecular biology, biotechnology, genetics, plant breeding and biometics.

Detail of POs and COs
Faculty of Arts

GEOGRAPHY

BA GEOGRAPHY (THREE YEAR PROGRAM)

Programme Outcome

Demonstrate knowledge of physical and cultural features of the earth and locate them on a map.Know about the basic disciplines of Geography and its sub branches.
Know the basic concepts and terminologies used in Geography like interior of the earth, plate tectonic, sea floor spreading, population growth, disasters, composition and structure of atmosphere, hydrosphere, etc
Differentiate between minerals and rocks, weather and climate, interior of the earth, basic industries, farming etc.
Course Outcome

B.A. PART-1

PAPER I: PHYSICAL GEOGRAPHY

The course enables the students the knowledge of:

Changing nature of Indian economy- agricultural growth during the plan period
B.A. PART III PRACTICAL

Purpose of various practical exercise is the develop curiosity about that subject
due to these different practical exercise students know about different aspects of geography.

English Literature

Programme outcomes for English Literature

By studying literature, pupils can improve their communication abilities and behaviour attitudes to higher standards. The study of literature gives the students the opportunity to explore their creativity in reading, writing, and enhance their thinking capacity

Programme Specific outcomes

The curriculum designed for English Literature covers all the literature from early British period to post-Colonial Period. It introduces students to a wide range of literary tradition and familiarises them with different facets of each literary era. They come across a jumble of feelings and ideas. They are aware of the literary history and how it influences literary artists' minds. Additionally, it promotes pupils' reading and writing habits. The extensive reading and writing improve their command over the language.The course prepares students for future success.

Course Outcomes

BA Part-I- Paper-I Poetry and Drama

Introducing the students with all forms and genres of poetry and drama.To improve communication skills in the students.
BA Part-I-Paper-II Prose and Fiction

To acquaint them to prose and fiction.Reading of essays and stories encourage their creativity.
BA Part-II- Paper-I Poetry and Drama

After Completing This Course, the Students will be able to Analyze Poetry and Drama Prescribed in Their Syllabus.

BA Part-II-Paper-II Prose and Fiction

Utilize Their Knowledge in Spoken English.Think About Their Aim of Life While Reading Essays, Stories and Novels of Hardy.
BA Part-III- Paper-I Poetry and Drama

After finishing final year, the students are now familiar with all forms of poetry and drama.They are acquainted with post-colonial literature.
They are also familiar with Commonwealth Literature.They now have an all -round approach to world literature.
BA Part-III-Paper-II Prose and Fiction

The final year course of prose and fiction imparts recognition of Indian Prose and Fiction.
The students have now developed understanding of the lessons imparted in the essays and stories.

History

1. Explain Indian Society and Culture.
2. Understand the Different Components in Indian society
3. Understand Indian Demographic profile

Science Faculty

Botany

PROGRAM OUTCOMES

By the end of B.Sc. program in Botany, a student will:

1. Acquire basic knowledge of various branches of Botany
2. Inculcate interest and love of nature with its myriad life forms
3. Acquire basic skills in the observation and study of nature and awareness of the conservation of the biosphere.
4. Be exposed to the diversity among life forms and understand the unity behind diversity
5. Learn the different biological techniques.
6. Develop a scientific attitude which make her open minded, critical and curious
7. Develop ability for the application of the acquired knowledge in life and become self-reliant and self sufficient.
8. Develop skill in practical work, experiments, equipments and laboratory use along with collection and interpretation of biological materials and data.
9. Be aware of natural resources and environment and the importance of conserving it.
10. Be able to communicate effectively their views and ideas on different issues related to botany.
11. Successfully pursue their career objectives in advanced education, professional courses, scientific career, teaching career in the school systems or related career following graduation.

PROGRAMME SPECIFIC OUTCOMES

The graduate of this programme will be able to:

1. Understand the importance and scope of the discipline.
2. Acquire a firm foundation in every aspect of Botany.
3. Do lifelong learning due to attention drawn to the world of plants and introduction to the methodology of systematic academic enquiry
4. Scientifically identify and list out plants in their locality
5. Identify the role of different plants and their mode of survival in the environment

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using laboratory and instrumentation techniques.

Programme Outcome

The aim of the program is to enhance students understanding in Biology And Diversity of Algae and Bryophytes, Microbiology, Mycology and Plant Pathology, Cytogenetics, Genetics and Plant Breeding Plant Ecology, Conservation and Evolution, Pteridophytes, Gymnosperms and Palaeobotany, Plant Developmental Biology, Cell and Molecular Biology, Plant Growth and Development, Skill Course Elective 1 Minor Research Project, Plant Tissue Culture And Genetic Engineering, Tools And Techniques In Plant Sciences, Minor Research Project.

Programme Specific Outcome

The graduates (PSO) of M.Sc. Can pursue career in following areas: Botany Food companies, Arboretum, Forest services, Biotechnology firms, Oil industry, Land Management agencies, Seed and Nursery Companies, Plant Explorer, Conservationist, Ecologist, Environment consultant, Horticulturist, Molecular Biologist, National parks, Educational institutions. Prepare the students for many competitive exams like RPSC, UPSC NET SET GATE.

Chemistry

B. Sc. Chemistry

Program Outcome

Nature and extent of the B.Sc. Chemistry Programme:

Chemistry is referred to as the science that systematically studies the composition, properties, and reactivity of matter at atomic and molecular level. The scope of chemistry is very broad. The key areas of study of chemistry comprise Organic chemistry, Inorganic Chemistry and Physical Chemistry.   In addition, employability of B.Sc. Chemistry graduate is given due importance such that their core competency in the subject matter, both theoretical and practical, is ensure

Aims of Bachelor's degree programme in Chemistry:

The broad aims of bachelor's degree programme in Chemistry are:

1. understanding of key chemical concepts, principles and theories.
2. To develop students' ability and skill to acquire expertise over solving both theoretical and applied chemistry

problems.

1. 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.
2. To provide the latest subject matter, both theoretical as well as practical, such a way to foster their core competency and discovery learning.

Learning Course Outcome B.Sc. Part -I

Determine the shape of nucleus using U.M.Explain and calculate the nuclear spin.Analyze the nuclear potential and elaborate properties of nuclear forces.
Apply semiempirical mass formulaExplain nuclear fission and fusion using nuclear liquid drop modelApply nuclear fission concepts to explain the nuclear reactor
Explain the formation of energy in sun using nuclear fissionAnalyze the concepts to explain the working of particle detector and counter.
Define lattice, Bravais crystal and miller indicesApply X-ray diffraction method to find the crystal structureUse the concept of phonon to explain the specific heat of solid
Explain the conductivity of solid by understanding crystal structure and different theorems

Paper-III- Electronics and Solid-State Devices

After Completing course student will be able to

Define Norton, thevenin etc. theoremApply the theorem to analyze the circuitsExplain the mechanism of formation of conductor and semiconductor
Define semiconductor, holesExplain working of P-N junctionExplain working of different semiconducting devicesApply semiconductor for rectification process
Explain working of TransistorElaborate the concepts to explain the different biasing of transistorExplain the AmplifierApply the Amplifier in different mathematical process
Define the Feedback in amplifiersExplain the oscillators on the basis of feedback in amplifier

Mathematics B.Sc.

(Mathematics) Programme Outcome

Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.
Ability to analyze a problem, identify and which may be appropriate to its solution.
Enhancing students' overall development and xz solving skills, creative talent and power of communication necessary for various kinds of employment.

Ability to pursue advanced studies and research in pure and applied mathematical science.
Programme Specific Outcome of B.Sc. Mathematics

Think in a critical manner.Formulate and develop mathematical arguments in a logical manner.
Course Outcomes

B.Sc.– Part I

Paper-I – Algebra

The students will be able to

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8. Learns the problem-solving methods

B Sc Part III Practical

1. Study of museum specimen, identified and classified the specimen of phylum Amphibia, Reptiles, Birds and Mammals

2. They gain knowledge from the prepared slides, the structure and arrangement of different cells in endocrine glands

3. Measurement of various parameters of water such as pH, CO_2, O_2, Cl, salinity, alkalinity and acidity

4. They will learn about antennal grooming in cockroach, study of photo tactic response of Tribolium,response of Paramecium towards stimulus.

5. They will understand about construction of frequency tables, histogram, polygons, pie charts, mean, median, mode, t-test and Chi square test

Commerce Faculty

ABST

B.COM [ABST] PROGRAM OUTCOME

1: After completing three years for Bachelors in Commerce (B.Com.) program, students would gain a thorough grounding in the fundamentals of Commerce and Finance. Especially for the students it will give the scope for self-employment as well as for getting good jobs of the competitive market.

2: The commerce and finance focused curriculum offers a number of specializations and practical exposures which would equip the student to face the modern-day challenges in commerce and business.

1. **Taxation (GST And Audit) (B.COM III)**: The learning Goods and Services Tax (GST) enables the commerce students and the business community to ease interaction with GST authorities. Especially for the students it will give the scope for self- employment as well as for getting good jobs of the competitive market. To enable the students to learn the concepts indirect tax and GST from the pre-GST period to post- GST period.

Business Management

Course outcome

Business Management

B.Com. Part-I

Paper-I Principles of management

After the completion of this course students will be able to:

Evaluate the global content for taking managerial actions of planning, organizing, directing and controlling.
Assess managerial practices and choices relative to ethical principles and standards.**Apply** their knowledge into management practices.
Specify how the managerial functions can be executed in a variety of circumstances and with different type of people/employees.

Paper-II Business law

After the completion of this course students will be able to:

Define various important terminologies of the different acts of Business Law like The Indian contract Act, The Sale of goods Act, Consumer Protection Act etc.
Apply the knowledge at the time of making an agreement or contract.**Demonstrate** knowledge of basic business or commercial law.
Identify the contract remedies and transactions involving the sale of goods.

B.Com. Part -II

Paper-I-Company Law

After the completion of this course students will be able to:

Describe the company and its types, management and various provisions regarding operation of company. **Plan** to incorporate a company according to requirement.