DEPARTMENT OF BOTANY

Course Outcomes UG level

Microbiology

1- Students understood the importance of microbes & their role in nature as biodegradation, nitrogen fixing, & medicine.

2- Demonstrate theory and practical skills in microscopy & their handling techniques and staining produce.

3- Known various culture media & their applications.

4- Understand the nature of viruses & how viruses can be used as tools to study biological process, as cloning vector & for gene transfer.

Fungi, Elementary Plant Pathology & Lichens

1- To know about what is fungi & why these achlonophythus organisms included in plant kingdom.

2- Understand the diversity of fungi.

3- Know the economic importance of fungi as especially food, medicine

4- Able to identify the symptoms of plant diseases which caused by fungi

Algae & Bryophyta

On completion of this course, students are able to

1- Understand the diversity of algae and know the systematic morphology and structure of algae.

2- Understand the thallus and gametophyte plant body.

3- Origin of life from sea to land (from aquatic to terrestrial) as amphibian plants

4- Understand the occurrence, thallus structure and reproduction in bryophyte

Pteridophyta, Gymnosperm and Elemantary Palaeobotany

On completion of this course, students are able to

1- understand the diversity of plant evolutionary trend from bryphyta to ptericlophyta

2- known about the ferm and taxonomic position of ferm

3- impotance of gymnosperm

4- to understand the stellar system and its evolution.

5- able to know process of fossilization

Taxonomy of Angiosperm

1- Understand the diversity of plant from primitive to advanced level.

2- Know the concept of methodology in taxonomy

3- Hand on exposure to experimental work on plant identification and especially local plants

4- able to know that flora and how to make a herbarium sheet

5- Economic importance of plants in our daily life as food, fodder and shelter.

Anatomy and Embryology

Able to know that section cuttings of plant root stem and flowers composition of tissue development of micro and megasporogenesis.

Cytology and Genetics

1- Understand the cell science

2- Understand cell wall, plasma membrane, cell organelles and cell division.

3- able to prepare the semi-permanent slide of different stages of mitosis.

4- Acquired the knowledge biochemical nature of nucleic acids, their role in living systems, experimental evidences to prove DNA as genetic material.

5- Students are able to analyze the scientific data of Mendel's law through biostatistics method.

Plant Ecology

1- Understand the relationship between environment & life.

2- Know about biotic & biotic factor & their role in ecosystems.

3- Learn the scope & importance of ecology in modern era

4- Able to preformatted the different ecological field experiment

5- Importance of ecotourism & ecosystem services.

Molecular Biology & Biotechnology

1- Students are able to know about the genomic organization or living organisms, study of DNA, genes & chromosome etc

2- Understand the fundamental of biotechnology

3- Know about basics protocols for tissue culture techniques

4- Able to perform the fundamentals of recombinant DNA Technology.

5- Understand the process of synthesis of proteins & role of genetic code in polypeptide

Plant Breeding & Biostatistics

1- Students are able to know about the new discipline to botany plant berrding

2- To introduce the student with branch of branch of plant breeding for the survival of human being from starvation

3- Understand the modern strategies applied in genetic & plant breeding to sequence & analyse in local crops.

4- Able to performed the experiment emasculation, mass selection, pure line selection & colonel selection.

5- Understand the role of plants in human welfare.

6- Used to solve Genetical problems through central tendency & chi square test etc.

Plant Physiology, Elementary Morphogenesis & Biochemistry:

On completion of the course, students are able to:

1- Role of diffusion, osmosis & water potential in relation to physiology of plants & in other organisms.

2- Learn & understand about mineral nutrition in plants.

3- Know about photosynthesis & respiration process in support with different experiment and prove it.

4- Nitrogen metabolism & its importance

5- skilled in use of grow regulators in agriculture field.

6- Understand the proportion of monosaccharide.

7- Significance of carbohydrate, proteins & fats in organisms (plants).

Economic Botany & Biodiversity

1- Understand the role of plants in human welfare.

2- Gain knowledge about various parts used for food, medicine etc.

3- Able to know & they can discuss about biodiversity & its role in earth.

4- Significance of plant diversity & Hot spots.

5- Conservation of biodiversity in our locality.

protein.

6- Know about the present status of mushroom industry in India.

M.Sc. Botany Programme Outcomes (PO)

1. Acquire fundamental knowledge in plant science and to make the student to understand that Botany is an integral part of the human life and developments.
2. Fundamental principles, practical skills and recent developments in the subject area.
3. Inspire and boost interest of the students towards plant sciences as the main subject and understand global issues.
4. To create foundation for advanced studies, research and development in Botany.
5. Understanding the classification of plants from cryptogams to phanerogams. Identification of the flora within field enhances basics of plants.
6. Study of biodiversity in relation to habitat will correlates with climate change, land and forest degradation.
7. Application of Botany in agriculture is through study of plant pathology.
8. Understand the ultra-structure and function of ecology, cell membranes, cell communications, signalling, genetics, anatomy, taxonomy, and plant physiology and biochemistry.

9. To understand the multi functionality of plant cells in production of fine chemicals and their wide spread industrial applications.
10. Understands different plant diseases, their causative organisms and control measures.
11. Develops skill to prepare different fungicides.

Outcomes of special paper in PG level

Plant Health Managements (Outcomes)

1-Students are able to diagnose the plant diseases through the general symptoms.
2-Understand the scope & importance of plant pathology.
3-Now they able to prepared the permanent & semi-permanent slides of pathogen
4-Know about the different pest types of pest applied in agriculture fields.
5-Can be identify the local disease which caused the severe damage to our crops as cereals, Horticultural crops. Vegetables, spices & medicinal plants.
6-Gain knowledge on Host parasite interaction process Diversity and cultivation of mushroom.

Diversity and Cultivation of Mushrooms (Outcomes)

1- Understand the diversity of mushroom.
2- Know about nutritional & medicinal value of edible mushrooms & poisonous mushrooms.
3- Able to know cultivation techniques of button mushroom, Mushroom.
4- Skill the student to earn the income through mushroom cultivation.
5- Gain the knowledge to overcome the problem of pollution caused by the different crop residues, because the fungi have the ability to recycle these waste & convert them into edible.

Ethnobotany (Outcomes)

1-Students are able the relevance of ethnobotany in the present context & indigenous.
2-Know about the major & minor ethnic groups or Tribes of India & their life styles.
3-Learn about identification of wild edibles plants
4-Understand the role of ethnomedicinal plants in local health care system.
5-Get awareness on the conservation practices of medicinal plants.

Program Outcome for the Department of Home science
Year 2021-22

1. Program Outcomes-

   The course focuses on skill development, innovation, and capacity building. Courses aim at making the student self reliant with necessary proficiencies for a wide variety of career with entrepreneurial skills and placement.

2. Programe specific outcomes-

   A – Specialized courses are in sync with industry academic needs national and global issues and challenges.

   B - Students are sensitized toward challenges and solution for social development from grass root level that is home.

3. Family resourse management-

   The curriculum focuses on imparting students with the knowledge to enhance functionality aesthetics and ergonomics of interior spaces designing and decorating interior spaces in residential and commercial setups.

4. Introduction to textiles –

   The study of textile helps one to understand the properties of the fabric that will enable you to choose the best method of washing and dry cleaning. The programs include ginning spinning weaving dyeing and painting.

5. Fundamental of food and nutrition –

   Students will gain the knowledge regarding nutritional classification of food method and medium of cooking, nutritive value and processing, storage of plant based food. Able to identify what foods are good sources for what nutrients. Understand the function and sources of nutrients role of nutrients in maintenance of good health.

6. Human development-

   Analyze structural inequities related to life span development to identify strategies for promoting social justice. Use research method in human development to design analyze and conduct research and present research findings.

7. Housing and interior decoration –

Interior design is a good career choice especially for those who want to show off their creativity in the most basic of ways. It allows one to put their natural abilities to use while also providing excellent job satisfaction.

8. Clothing construction – basic stitching and creative skill will be develop will help them to construct their garments. Students will be able to use different stitches and seams as per the requirement of the garment. Students will gain practical understanding of different textile materials (fibre, yarn, fabric)

अनुसूया प्रसाद बहुगुणा राजकीय स्नातकोत्तर महाविद्यालय अगस्त्यमुनि रुद्रप्रयाग

संस्कृत विभाग

Program out comes:-

संस्कृत साहित्य समस्त साहित्यिक विषयों में उच्च स्थान को प्राप्त किए हुए हैं। संस्कृत का अध्ययन कर व्यक्ति भारतीय इतिहास, संस्कृति और सभ्यता, धर्म और सामाजिक जीवन को वास्तविक रूप से जान सकता है।

स्नातक और स्नातकोत्तर के पाठ्यक्रम न केवल व्यवहारिक कौशल के लिए तैयार किए गए हैं अपितु विभिन्न संस्कृत ग्रंथों के माध्यम से भारत के समृद्ध विरासत और गतिशील प्रचलित परिदृश्य की गहरी समझ विकसित करते हैं। संस्कृत विषय से स्नातक और स्नातकोत्तर उत्तीर्ण कर छात्र और छात्राएं विभिन्न क्षेत्रों में सक्षम होते हैं:-

छात्र संस्कृत साहित्य, राष्ट्रीय और वैश्विक परिदृश्य को समझने में सक्षम होता है। वेद व्याकरण, स्मृति, काव्य, दर्शन आदि का ज्ञान प्राप्त कर उच्च शिक्षा के योग्य बनता है। उसमें आत्मिक, आध्यात्मिक, दार्शनिक, सांस्कृतिक और व्यवहारिक बौद्धिक शक्ति का विकास होता है। छात्र की तार्किक, आलोचनात्मक, विश्लेषणात्मक और समीक्षात्मक क्षमता का विकास होता है। संस्कृत के प्राचीन और अर्वाचीन ग्रंथों के अध्ययन से भारतीय इतिहास, दर्शन संस्कृत और साहित्य की एक मजबूत अवधारणा विकसित होती है। संस्कृत व्याकरण के अध्ययन से विद्यार्थियों में संचार कुशलता का विकास होता है। विद्यार्थी में सामाजिक जिम्मेदारी का समावेश होता है और समाज को संस्कृत भाषा के प्रति जागरूक करता है अत: वह राष्ट्र का जिम्मेदार नागरिक बनता है। संस्कृत साहित्य के विभिन्न क्षेत्रों में शिक्षण और अनुसंधान (शोध) के लिए दक्षता और व्यवहार कौशल को प्राप्त करता है। संस्कृत से स्नातक और स्नातकोत्तर करने के पश्चात् विद्यार्थी सरकारी और गैर सरकारी क्षेत्रों में रोजगार को प्राप्त कर सकता है। स्नातकोत्तर के पश्चात नेट और यू सेट आदि की परीक्षाओं के लिए और उसके पश्चात महाविद्यालयों में शिक्षण कार्य के लिए योग्य बन

जाते हैं। संस्कृत से स्नातक करने के पश्चात बीएड कर विद्यार्थी विद्यालयों में व अन्य शैक्षणिक संस्थानों में शिक्षक पदों के लिए आवेदन कर सकता है। छात्र भारतीय सेना में भी एक सम्मानित पद 'विषय गुरु' और 'धर्म गुरु' पद को प्राप्त करने के लिए आवेदन कर सकते हैं। छात्र अनुवादक, पत्रकार, योग-गुरु, वास्तु -आचार्य, पुरोहित, ज्योतिषाचार्य और विभिन्न केन्द्रीय तथा राजकीय सेवा पदों पर कार्य कर सकते हैं।

Course Out Comes:-

स्नातक स्तर:- बी.ए. संस्कृत विषय के अंतर्गत तीन वर्षीय पाठ्यक्रम में कुल छः प्रश्न पत्र सम्मिलित हैं।

बी.ए. प्रथम वर्ष

प्रथम प्रश्न पत्र:- (सुगम पाठ व्याकरण एवं अनुवाद)

भर्तृहरि के नीतिशतकम् का अध्ययन कर विद्यार्थी नैतिक कर्तव्य के प्रति जागृत होता है। विद्यार्थियों को हितोपदेश में वर्णित लोक कथाओं के माध्यम से नीति शिक्षा प्राप्त होती है। विद्यार्थी व्याकरण से संधि सूत्र, संज्ञा सूत्र तथा अनुवाद को सीखते हैं जिससे उनमें संस्कृत भाषा पर मजबूत पकड़ बनती है।

द्वितीय प्रश्न पत्र:-(नाटक अलंकार एवं छंद)

विद्यार्थियों को संस्कृत साहित्य के महान कवि कालिदास तथा उनकी विश्व प्रसिद्ध रचना अभिज्ञान शाकुंतलम् नाटक का परिचय प्राप्त होता है। काव्य की शोभा बढ़ाने वाले अलंकार तथा छंद का ज्ञान प्राप्त होता है। नाट्यसाहित्य में नाट्य तत्वों का अध्ययन करने से विद्यार्थियों में नाट्य सृजन की क्षमता का विकास होता है ।

बी.ए. द्वितीय वर्ष

प्रथम प्रश्न पत्र:-(गद्य काव्य, प्राचीन एवं अर्वाचीन संस्कृत साहित्य का इतिहास)

विद्यार्थियों को बाणभट्ट तथा कादंबरी का परिचय प्राप्त होता है। शुकनाश के संक्षिप्त उपदेश विद्यार्थियों को मानवीय ज्ञान प्राप्त होता है। शिवराज विजय के अध्ययन से भारत देश की प्राचीन संस्कृति तथा स्थिति का ज्ञान प्राप्त होता है। प्राचीन तथा अर्वाचीन संस्कृत साहित्य की विशेषताओं का परिचय प्राप्त होता है।

द्वितीय प्रश्न पत्र:-(वेद एवं दर्शन)

विद्यार्थियों को ऋग्वेद के अग्नि सूक्त, विष्णु सूक्त, पुरुष सूक्त, यजुर्वेद के शिव संकल्प सूक्त और अथर्ववेद के पृथ्वी सूक्त के माध्यम से वैदिक देवताओं की विशेषताओं और महत्व का ज्ञान प्राप्त होता है। विद्यार्थी श्रीमद्भगवत गीता के ज्ञान से परिचित होते हैं। तर्कसंग्रह के सप्त पदार्थों का ज्ञान मिलता है। कठोपनिषद् में वर्णित नचिकेता और यम संवाद के द्वारा आत्म तत्व का ज्ञान प्राप्त होता है। वेद का अर्थ वैदिक छंद प्रतिपाद्य विषयों का ज्ञान वैदिक साहित्य का इतिहास के अध्ययन से होता है।

बी.ए. तृतीय वर्ष

प्रथम प्रश्न पत्र:-(काव्यलोचन, योग, आयुर्वेद तथा वास्तु विज्ञान)

विश्वनाथ की रचना साहित्य दर्पण के अध्ययन से काव्य का लक्षण, काव्य का प्रयोजन आदि का ज्ञान प्राप्त होता है। पतंजलि के योग सूत्र के अध्ययन से विद्यार्थियों को योग का अर्थ और प्रयोजन, योग के भेदों तथा समाधि आदि के विषय में ज्ञान प्राप्त होता है। चरक संहिता के षड् ऋतु चर्या मात्र के अध्ययन से विद्यार्थियों को छह ऋतुओं में किस प्रकार का आहार-विहार करना चाहिए यह जानकारी प्राप्त होती है वास्तुसौख्यम् के अध्ययन से वास्तु विज्ञान का परिचय मिलता है।

द्वितीय प्रश्न पत्र:-(उत्तराखंड का अर्वाचीन संस्कृत साहित्य, भारतीय संस्कृति एवं निबंध)

उत्तराखंड के आधुनिक लेखकों के पद काव्य, खंड काव्य, नाटकों का परिचय प्राप्त हुआ जिससे विद्यार्थियों को स्वयं काव्य रचना करने की प्रेरणा मिलती है। भारतीय संस्कृति का स्वरूप विशेषताएं पंच महायज्ञ, वर्ण व्यवस्था, आश्रम व्यवस्था, सोलह संस्कार आदि के विषय में ज्ञान प्राप्त होता है संस्कृत के निबंध को पढ़ने व लिखने से विद्यार्थियों में भाषा कौशल का विकास होता है।

स्नातकोत्तर स्तर:- एम.ए संस्कृत विषय के अंतर्गत द्वि-वर्षीय पाठ्यक्रम में 16 प्रश्न पत्र हैं।

एम.ए. प्रथम सत्र

प्रथम प्रश्न पत्र:-(वैदिक सूक्त तथा निरुक्त)

विद्यार्थी वैदिक मंत्रों पाठ करने में सक्षम होते हैं। विद्यार्थियों को इंद्र, सावितृ, रूद्र, उषस् आदि वैदिक देवताओं का परिचय प्राप्त होता है। नासदीयसूक्त का अध्ययन कर सृष्टि उत्पत्ति के विषय में ज्ञान प्राप्त होता है। यास्क के निरुक्त से वैदिक शब्दों का अर्थ ज्ञान व वैदिक शब्दों की व्युत्पत्ति के विषय में ज्ञान प्राप्त होता है।

द्वितीय प्रश्न पत्र:-(नाटक एवं नाट्य साहित्य का इतिहास)

नाटक एवं नाट्य साहित्य का अध्ययन कर विद्यार्थी में नाटक कौशल का विकास होता है भवभूति के प्रसिद्ध नाटक उत्तररामचरितम् के पाठ से विद्यार्थियों में नैतिक, सामाजिक, सांस्कृतिक मूल्यों और सिद्धांतों का समावेश होता है। संस्कृत साहित्य के विभिन्न नाटक-कारों का परिचय प्राप्त होता है।

तृतीय प्रश्न पत्र:-(भारतीय दर्शन)

भारतीय दर्शन संस्कृत के मूल सिद्धांतों का प्रतिपादन करते हैं। विद्यार्थी भारतीय दर्शन के इतिहास से परिचित होता है। तर्क भाषा में वर्णित सात पदार्थ द्रव्य,गुण,प्रमाण आदि और

सांख्यकारिका में वर्णित पच्चीस तत्वों का परिचय प्राप्त कर विद्यार्थी अपनी तार्किक, आलोचनात्मक और विश्लेषणात्मक शक्ति का विकास करता है।

चतुर्थ प्रश्न पत्र:- (व्याकरण **एवं अनुवाद)**

विद्यार्थी संस्कृत व्याकरण के उन्नत और वैज्ञानिकता का ज्ञान प्राप्त करता है समास व स्त्री प्रत्यय आदि का ज्ञान प्राप्त करता है और अनुवाद के माध्यम से संस्कृत भाषा पर अपनी पकड़ को मजबूत करता है।

एम. ए.द्वितीय सत्र

पंचम प्रश्न पत्र:-(महाकाव्य)

विद्यार्थी संस्कृत महाकाव्य की विशेषताओं का अध्ययन करता है। कालिदास के रघुवंशम् और श्रीहर्ष के नैषधीयचरितम् का पाठ कर विद्यार्थियों को तात्कालिक, भौगोलिक स्थिति की जानकारी होती है साथ ही प्राचीन संस्कृति का ज्ञान होता है। महाकाव्य के लक्षण का ज्ञान होने से विद्यार्थी स्वयं काव्य सृजन में सक्षम होता है।

षष्ठ प्रश्न पत्र:-(धर्मशास्त्र)

विद्यार्थी मनुस्मृति और याज्ञवल्क्य स्मृति में वर्णित सृष्टि उत्पत्ति, वर्णव्यवस्था, आश्रमव्यवस्था आदि और धर्म के वास्तविक स्वरूप का ज्ञान प्राप्त करता है। जिससे उसे अपने जीवन में वास्तविक धर्म व मानवीय कर्तव्य का पालन करने की प्रेरणा मिलती है। धर्म शास्त्र के पाठ से विद्यार्थियों में ना केवल बौद्धिक अपितु व्यवहारिक ज्ञान की भी वृद्धि होती है।

सप्तम प्रश्न पत्र:-(पुराणेतिहास)

वाल्मीकि रामायण और भागवत पुराण के अध्ययन करने से विद्यार्थी को उस काल की सामाजिक, सांस्कृतिक और राजनीतिक स्थिति के संदर्भ में ज्ञान प्राप्त होता है। रामायण के अध्ययन के माध्यम से विद्यार्थी आधुनिक काल में भी वांछित आदर्शों को प्राप्त करते हैं और पुराणों की विशेषताओं का ज्ञान प्राप्त करते हैं तथा भारतीय सांस्कृतिक विरासत के मूल स्रोत को जानते हैं, जिससे उनमें गौरवशाली सांस्कृतिक विरासत के प्रति आदर भाव जागृत होता है।

अष्टम प्रश्न पत्र:-(काव्यशास्त्र)

विद्यार्थियों को काव्यशास्त्र के अध्ययन से काव्य का प्रयोजन, काव्य का लक्षण, काव्य के हेतु, काव्य के प्रकार तथा रस, छंद, अलंकार आदि का गुण ज्ञान प्राप्त होता है और काव्यशास्त्र के इतिहास के अध्ययन से विभिन्न काव्यशास्त्रीयों मम्मट, विश्वनाथ, भामह, दंडी और आनंदवर्धन आदि विद्वानों का परिचय प्राप्त होता है। काव्यशास्त्र के सिद्धांतों का अध्ययन करने से विद्यार्थी को विभिन्न काव्यों को आलोचनात्मक प्रवृत्तियों की कसौटी पर परखने की सहायता मिलती है।

एम. ए. तृतीय सत्र

नवम प्रश्न पत्र:-(गद्यकाव्य)

गद्यसाहित्य का इतिहास का पाठ करने से विद्यार्थी को गद्य साहित्य की विशेषताओं और विद्वान गद्य लेखकों का परिचय प्राप्त होता है। कादंबरी की कथा का अध्ययन करने से विद्यार्थियों को तत्कालीन संस्कृति और भौगोलिक स्थिति का ज्ञान होता है शुकनाश के उद्देश्यों से विद्यार्थियों में मानवीय गुणों का समावेश होता है।

दशम प्रश्न पत्र:-(भारतीय संस्कृति तथा निबंध)

विद्यार्थियों में भारतीय संस्कृति के प्रति आदर भाव उत्पन्न होता है और वह वर्ण-व्यवस्था, आश्रम- व्यवस्था, पुरुषार्थ, संस्कार और पंच महायज्ञ के वास्तविक महत्व को जानकर वर्तमान में उसकी प्रासंगिकता को देखते हैं। विद्यार्थी को संस्कृत में निबंध लिखने का कौशल प्राप्त होता है।

एकादश प्रश्न पत्र:-(भाषा विज्ञान)

भाषा विज्ञान भाषा के अध्ययन की वह शाखा है जिसमें भाषा की उत्पत्ति स्वरूप विकास आदि का वैज्ञानिक और विश्लेषणात्मक अध्ययन किया जाता है और विद्यार्थी इसका अध्ययन कर राष्ट्रीय एवं अंतर्राष्ट्रीय, देसी-विदेशी,विकसित-अविकसित, सभी प्रकार की भाषाओं से परिचित होता है तथा शब्द और अर्थ की वैज्ञानिकता को जानता है।

द्वादश प्रश्न पत्र:-(अर्वाचीन संस्कृत साहित्य)

विद्यार्थी आधुनिक संस्कृत साहित्य का परिचय प्राप्त करता है जिससे उसमें प्राचीन व अर्वाचीन साहित्य की तुलना करने का कौशल बढ़ता है।

एम.ए. चतुर्थ सत्र

त्रयोदश प्रश्न पत्र:-(गद्य काव्य तथा चम्पू)

विद्यार्थी आचार्य दंडी और उनकी रचना दशकुमारचरितम् का परिचय प्राप्त करते हैं। त्रिविक्रम भट्ट के नल चम्पू काव्य का अध्ययन करते हैं। गद्य साहित्य की विशेषताओं का अध्ययन करते हैं।

चतुर्दश प्रश्न पत्र:-(नाट्य एवं नाट्य शास्त्र)

नाट्य शास्त्र के अध्ययन से विद्यार्थी को संस्कृत नाट्य परंपरा की प्रकृति और विशेषताओं का ज्ञान प्राप्त होता है धनंजय के दशरूपक के पाठ से विद्यार्थी को नाटक (रूपक) के दस

प्रकार, वस्तु नेता और रस का ज्ञान प्राप्त होता है। जिससे विद्यार्थियों में नाटकों का मूल्यांकन करने का कौशल बढ़ता है और वह स्वयं भी नाटक का सृजन कर सकता है।

पंचदश प्रश्न पत्र:-(साहित्य शास्त्र)

आनंद वर्धन की रचना ध्वन्यालोक का अध्ययन कर विद्यार्थी ध्वनि सिद्धांत को भलीभांति जान पाता है विद्यार्थी पंडितराज जगन्नाथ की रचना रसगंगाधर का अध्ययन कर रसस्वरूप, भावध्वनि, गुणगौरव, शब्दशक्ति, तथा काव्य अलंकारों का ज्ञान प्राप्त करता है, जिससे उसमें काव्य सृजन की क्षमता बढ़ती है।

षोडश प्रश्नपत्र:- (मौखिकी)

यह एक प्रकार की परीक्षा है, जिसमें परीक्षक द्वारा विद्यार्थी से संपूर्ण पाठ्यक्रम में से प्रश्न किए जाते हैं और विद्यार्थी मौखिक रूप से उन प्रश्नों का उत्तर देता है, इससे विद्यार्थी में अभिव्यक्ति की क्षमता का विकास होता है।

Programme and Course Out Comes (Geography)

B.A. (I+II+IIIrd yearly System) + P.G.

1. Physical Geography

Student will gain the knowledge of Physical Geography. Student will have a general understanding about the geomorphological and geotechnical process and formation. They will be able to correlate the knowledge of physical geography with the human geography.

2. Human Geography-

Student will be able to acquire the knowledge of human geography and will correlate it with their practical life.

3. Environment Geography-

Student will gain knowledge about concept, scope of environmental geography and components of environment. Student will develop an idea about human-environment relationships. Know about environmental programmes and policies.

4. Economics geography-

Student will gain knowledge about different type of primary activities, develop and idea about different type of secondary activities. They acquire knowledge about different types of tertiary activities.

5. Geography of India-

Student can know about their own countries land formation, climate and natural vegetation. They understand the economic resources of India. They understand the social distribution of population of their country. Develop an idea about regionatisation of India.

6. Practical-

Student will gain knowledge about topographical maps. They identification of different types of rock and minerals. They brings direct interaction of different types of surveying instruments.

7. Urban Geography-

Student can explain the town and cities in India and word perspective. They gain knowledge about the history of urbanization in the developed and developing countries. They can understand the functional differences between rural and urban settlement.

Students can define the problems of urban area and try to solve them. They will know the characteristics of urban settlement. They able to identify the urban environment problem and how to solve those problem.

8. Geographical Thought-

Student will gain knowledge about the historical evolution of geographical thoughts. They understand the philosophy of deterministic, possibilistic and ecological approach. They know about man-environment relation regional location and space.

9. Disaster Management-

Student gain knowledge about approaches to Lazard study. Develop an idea about factors, consequences and management of earthquake, land slide, flood and erosion etc. They acquire knowledge about human induced disaster.

2. DEPARTMENT OF PHYSICS

Program Outcomes (POs): The Physics department offers two programs:

1. Physics for B.Sc. students of PCM.
2. M.Sc. Physics.

Both these programs are primarily geared towards cultivating the idea – "***Physics is the study of nature and its laws (till the most fundamental level)***", amongst the students. The Program Specific Outcomes (PSOs) and the Course Outcomes (COs) of the individual programs/courses/papers are more or less spun around this theme and are listed below.

Program Specific Outcomes (PSOs): For the Under-Graduate Physics program (B.Sc. Physics for PCM).

PSO1: Understanding the fundamental concepts of Physics and its basic laws.

PSO2: Acquire the necessary mathematical-tools and concepts required for understanding the underlying physics.

PSO3: Acquire theoretical and experimental knowledge/skill related to the physical phenomenon, as well as the ability to connect both (theory & practical).

PS04: Acquire problem solving skills and ability to apply them to real world physical phenomenon.

PS05: Motivation to pursue higher studies (Postgraduate, Research etc.) in Physics.

Course Outcomes (COs): For the Under-Graduate Physics program (B.Sc. Physics for PCM).

Mechanics	Understanding - Frame(s) of Reference, Newton's Laws (along with application for point particles as well as system of particle), (conservative) force and potential energy, Work-Energy Theorem, Rocket motion. Understanding quantities and ideas related to rotational motion- Angular Velocity, Angular momentum, Torque, Moment of Inertia (calculations and related theorems), Conservation of Angular Momentum. Understanding Newton's law of gravitation, Gravitational Field, Potential & Potential Energy, Central force, Kepler's Laws of Planetary motion, Satellite and Planetary orbits and motions. Understanding material properties such as elasticity, stress, strain, various elastic constants and their relationships, Experimental methods to determine the various elastic properties. Understanding fluids at rest (surface tension, excess pressure) as well as in motion (viscosity, flow through capillary tube, Bernoulli's theorem, Poiseuille's formula), Experimental methods to determine surface tension and viscosity.
Electricity and Magnetism	Understanding vector analysis (applying concepts for problem solving), the nabla operator (Gradient, Divergence & Curl), Differentiation and Integration of Vectors (fields), Integral Theorems (Gauss, Stokes, Green and corollaries). Understand the basic concepts of Electrostatics-Field, Flux, Gauss's Theorem with applications, Potential and relation with Field, Potential Energy. Also concept of conductors, dielectrics and capacitance, The Electric-Vector. Understand the basic concepts of Magnetostatics- Biot-Savart's Law and applicatons, The Lorentz Force law, Div and Curl of magnetic field and the magnetic vector potential, Ampere's circuital law, Magnetism in matter (Magnetization, Permeability, Susceptibility) and Types of Magnetic materials (Dia, Para & Ferro). Understanding inductance (self and mutual and induction), Faraday's Law, Lenz' Law & energy conservation, AC circuits- RC, LC and LCR, Resonance. Realizing that EM is contained in the 4 Maxwell's Equations, Understanding equation of continuity, displacement current, Maxwell's correction to Ampere's circuital law. Gain knowledge on EM waves, propagation and their properties using Maxwell's equations, Polarization of EM Waves.
Waves, Oscillations & Acoustics	Understanding Simple Harmonic Motion, the Harmonic Oscillator Equation and solutions, Linearity and Superposition principle, Superposition of Harmonic Oscillations- Collinear (Interference & Beats) and Perpendicular (Lissajous Figures). Understanding waves and wave motion, Waves on a string (travelling and standing), Normal-modes, Group and Phase velocities. Understanding the Fourier Theorem and its applications. Understanding Damped Harmonic Oscillations, Over/Under/Critical damping, Relaxation time, LCR circuit. Understanding Forced Harmonic Oscillations, Transient and Steady state behavior, Resonance and Sharpness, Bandwidth, Quality Factor. Understanding intensity and loudness of sound waves, Decibels, Ultrasonic waves (generation, detection and uses), Building acoustics, Reverberation time and Sabine's formula, (Acoustic) design of buildings.

Practical (B.Sc. 2nd Year)	The various practicals included in the Physics syllabus of B.Sc. 1 are aimed at understanding (and measuring) the phenomenon/ quantities studied in the theory papers (e.g. ideas about Moment of Inertia, Elastic constants, Simple & Compound pendulums, Current, Voltage, Resistances, Solenoid, LCR circuit, SHM, Normal modes of a string etc.). The student should use and develop "hand-skills", observation-skills, mathematical tools (analytical, numerical, graphical etc.) to connect theory with experiments.
Thermal Physcis& Statistical Mechanics	Understanding the basic thermodynamic concepts- State variable, Equilibrium, Heat, Work, Zeroth and First Laws and the concepts of Temperature and Internal Energy, Applications of First Law to various processes (Adiabatc, Isothermal etc.), Mayer's relation. Understanding the need of second law of thermodynamics, Reversible & Irreversible processes, Heat Engine and Refrigerator, Second Law of Thermodynamics (in term of Engines and Refrigerators), Concept of Entropy, The Carnot's cycle, Second law in terms of entropy change, Third law of thermodynamics (the Nernst theorem). Understanding the four thermodynamic potentials, The Maxwell's relations and applications (response functions, Joule-Thompson cooling, Calusius-Clapeyron equation etc.) Understanding the Kinetic Theory of Gases (towards a microscopic description), Maxwell's velocity distribution law, transport phenomenon, the classical equipartition theorem and its use to determine specific heats of mono-atomic and diatomic gases. Understanding Blackbody radiation (the first step towards quantum mechanics), Spectral emissive power, Energy Density of Cavity Radiation, The Rayleigh-Jeans Law, Planck's law and deducing Wien's displacement law, Wien's distribution laws (1st and 2nd), Stefan-Boltzmann law and Rayleigh-Jeans from it.
Optics	Understanding Geometrical Optics- Fermat's principle of extremum path and applications, Cardinal points, Combination of Lenses, Lagrange equation of magnification. Understanding optical instruments- Eye pieces (Ramsden's, Huygen's and Gaussian), Aberrations (and types) and their corrections. Understanding the Interference of Light- The superposition principle, Coherence and conditions for interference, Double slit interference, Division of amplitude and division of wavefront, Fresnel's Biprism, Phase change upon reflection, Thin-film interference (Haidenger and Fizeau fringes), Newton's rings (theory and experimental setup), The Michelson Interferometer and its (experimental) use, Fabry-Perot interferometer. Understanding diffraction of light- Fresnel diffraction, Half-period zones and zone-plate, Diffraction pattern of edge, slit and wire, Fraunhofer diffraction (single, double and multiple slits), The diffraction grating as a measurement tool. Understanding polarization of light- Transverse EM Wave, Plane polarized light (production and analysis), Malus Law, Brewster's Law, The Nicol Prism, Circularly and Elliptically polarized light, Optical rotation, The polarimeter (experimental setup also).
Solid State	Understanding Crystal Structure, Lattice, Basis, Bravais Lattice, Unit Cell, The

Physics	seven crystal systems and the fourteen Bravasis lattices; SC, BCC, FCC, HCP and diamond structures, NaCl, CeCl and Zinc Blende structures. Understanding reciprocal lattice, Brillouin Zone, Reciprocal lattices of SC, BCC and FCC lattices, Miller indices, X-ray diffraction, Bragg's Law, Methods of X-ray diffraction (Laue, Powder, Rotating Crystal). Understanding lattice vibrations and phonons (sound quanta), Monoatomic and Diatomic chains, Acoustical and Optical branches, Specific heats of solids (Dulong-Petit, Einstein and Debye theories), the T^3 law. Understanding the free electron theory of metals (the electron gas), Lorentz-Drude Theory, Properties of metals (Thermal and Electrical conductivities, Electronic specific heat, Thermionic emission), Widemann-Franz relation, Sommerfeld theory. Understanding the basics of band theory- the Kronig-Penny model, Band gaps, Conductors, Semiconductors and Insulators, Intrinsic and Extrinsic Semiconductors (P & N type), Conductivity, Hall effect and Hall coefficient.
Practical (B.Sc. 1st Year)	The various practicals included in the Physics syllabus of B.Sc. 2 are aimed at understanding (and measuring) the phenomenon/ quantities studied in the theory papers (e.g. ideas about thermal conductivity, blackbody radiation, calorimetry, statistical probabilities, dispersion, interference, gratings, lens combinations, polarization etc). The student should use and develop "hand-skills", observation-skills, mathematical tools (analytical, numerical, graphical etc.) to connect theory with experiments.
Quantum Mechanics	Understanding the origins of quantum theory- Blackbody radiation and early radiation laws, Planck's (revolutionary) idea (the quantum hypothesis & birth of quantum mechanics), Photoelectric and Compton effects. Understanding the wave nature (and hence dual nature) of matter, De Broglie's idea of matter waves and their wavelength, Davisson-Germer Experiment, Wave-particle duality, The uncertainty principle (position-momentum and Energy-time), Interference experiments with particles. Understanding the Schrodinger's equation (quantum mechanical equation of motion), Time dependent and time-independent versions, Framework of QM (postulates, wavefunction- properties and physical significance), Probability and Conservation, Operators, Eigenfunctions and Eigenvalues, Expectation values, The free particle wavefunction. Learning to solve the Schrodinger's equation, Stationary states, Boundary conditions lead to quantization, Potential Step & Barrier and transmission, Potential well (infinite and finite depths), The one dimensional harmonic oscillator in QM, Zero point energy. Learning to solve the Schrodinger's equation in three dimensions (for spherically symmetric systems), The Schrodinger's equation for the Hydrogen atom and solving it using separation of variables, Angular momentum eigenfunctions (spherical harmonics), Solving the radial equation using Frobenius's method, Emergence of the various quantum numbers (n, l and m).
Modern Physics	Understanding the various atomic models- Thomson, Rutherford and Bohr, the Bohr model and the hydrogen spectra, Other quantum ideas/experiments- Bohr-Sommerfeld model and quantization condition, the Stern-Gerlach experiment and electron spin, Electron magnetic moment, Bohr magneton, Larmor's precession, The vector atom model, Space quantization.

	Understanding optical spectra (on the basis of the vector atom model), LS and JJ couplings, Selection and Intensity Rules, The fine structure of sodium D lines, Magnetic interactions and Zeeman effect, X-ray spectra and Moseley's Law. Understanding basics of radiation, Absorption and Emission (spontaneous and stimulated), The Einstein's A and B coefficients, Metastable states (long living), Population inversion, Pumping, Lasing action and Laser/Maser. Understanding the atomic nucleus, Constituents of the nucleus, properties, Nature of nuclear force, Binding Energy and BE curve, Stable nuclei, The semi-empirical mass formula, Models of the nucleus (Liquid drop and Shell model). Understanding radioactivity, Decay of nuclei, Radioactive decay law, Mean and half life, alpha, beta and gamma decays and their features, Pauli's neutrino prediction, Ideas of fission and fusion of nuclei, Mass deficit and energy generation, Controlled nuclear fission and the nuclear reactor, Energy production in stars, Particle detectors.
Basic Electronics	Understanding elementary semiconductors and devices (intrinsic, extrinsic- P & N), the PN diode and its characteristics in forward and reverse bias, Zener diode, Optoelectric devices- LEDs, Photodiode and Solar cell. Understanding diode circuits- The rectifier- Half-wave, Full-wave (Centre tapped and Bridge versions), Ripple factor and Efficiency, Filters (C, L, Pi etc.), Clipping and Clamping circuits using diodes, Voltage multipliers, Zener diode and voltage regulation. Understanding transistors and amplifiers- Bipolar Junction transistors (NPN, PNP), Characteristics (input and output) in various configurations (CE, CB & CC), Current gains alpha and beta and their relation, Load line analysis, Q-point, Active, Cutoff and Saturation regions, Transistor biasings; Transistor Amplifiers- Voltage, Current and Power, Class A, B and C amplifiers; The Field Effect Transistor (FET) and the Uni-Junction Transistor (UJT) Understanding Oscillator circuits- Feedback (negative and positive), Birkhausen's criterion, RC (Wein bridge and Phase-Shift) & LC (Collector tuned and Colpitt) oscillators and frequency of oscillation, Crystal oscillators, The Multivibrator and various operation modes (Monostable, Astable and Bistable). Understanding Digital Electronics and Circuits- Number systems (Binary etc.) and conversions, Basic Logic Gates (AND, OR & NOT) and realizations using diodes and transistors, Universal Gates (NAND & NOR), Other gates, Boolean Algebra- De Morgan's Theorem, Simplifying logic circuits, Minterm, Maxterm, SOP and POS, Karnaugh Map, Binary arithmetic (addition, subtraction) using circuits- Half/Full adders, Word (4-bit) binary adder-subtractor.
Practical (B.Sc. 3rd Year)	The various practicals included in the Physics syllabus of B.Sc. 3 are aimed at understanding (and measuring) the phenomenon/ quantities studied in the theory papers (e.g. ideas about Energy quanta, quantization, diodes, LEDs, rectifiers, power supplies, transistors, amplifiers, oscillators, logic gates, Boolean algebra, logic circuits etc). The student should use and develop "hand-skills", observation-skills, mathematical tools (analytical, numerical, graphical etc.) to connect theory with experiments.

Program Specific Outcomes (PSOs): For M.Sc. Physics.

PSO1: Strengthening and further understanding of the fundamental concepts of Physics and its basic laws (as acquired during the Under-graduate studies) by augmenting mathematical

rigor (at the Physicists level) along with Physical interpretations (and clear physical picture(s)) of any theory/process/situation.

PSO2: Acquire the necessary mathematical-tools (analytic, approximate, numerical, graphical etc.) and concepts required for understanding the underlying physics and use them to solve complex and advanced problems (including those with real world applications).

PS03: Gain substantial knowledge in the various (core) branches of Physics- viz. Classical Mechanics, Electrodynamics, Mathematical Methods, Quantum Mechanics, Statistical Mechanics, Condensed Matter Physics, Astrophysics, Electronics, Nuclear Physics, Particle Physics etc.

PSO4: Acquire theoretical and experimental knowledge/skill related to the physical phenomenon, as well as the ability to connect both (theory & practical). Also gradually develop the scientific method by designing and conducting experiments.

PS05: To get an exposure to research and research methodology during the dissertation work (theoretical and/or experimental) to be performed during the last semester.

PS06: Motivation to pursue a research/academic career in Physics. Aim towards writing and qualifying in various competitive exams- (e.g. CSIR-UGC-NET, GATE, JEST, BARC, DRDO, Entrance exams of premier research institutes (National & International)).

PS07: Gain knowledge of the subject along with general competence and analytical skill for employment in other sectors viz. industry, R&D, consultancy, public administration etc.

Course Outcomes (COs): For M.Sc. Physics.

Classical Mechanics	Understanding the various alternative formulations of Classical Mechanics (e.g. Newtonian, Action Principle(s), Lagrangian and Hamiltonian formulations). Realizing the need (Advantages/Disadvantages) of the various formulations and the unified appearance of the various conservation laws. Paving the way for transition towards Quantum Mechanics (as well as proper understanding/formulation of Statistical Mechanics) via the appropriate formulation of Classical Mechanics. Applying the ideas to problem solving- Rigid body dynamics, Small Oscillations etc.
Mathematical Physics	Acquiring the mathematical tools needed during Physics study at the M.Sc. level (and elsewhere also). Realizing the "unreasonable effectiveness" of Mathematics in the Physical Sciences (in general). Working with mathematical rigor (at the Physicists level of rigor) and developing the ability/habit of tackling complex problems. Applying the tools acquired here to the other courses (e.g. CM, ED, QM, SM etc.)
Astrophysics	Gain a basic understanding of applying Physics at the grandest scales i.e. in Astrophysics/Cosmology.

	Understanding observational methods/tools and related theoretical concepts to infer properties of bodies/system located far away in the Universe. Understanding stellar processes and features (Energy generation, Magnitudes, H-R diagram, Evolution, Brightness, Luminosity, Spectra etc.) A mathematical understanding of the processes occurring within a star in the form of some fundamental physics equations (Mass distribution, Hydrostatic Equilibrium, State equations, R-V theorem etc.)
Electrodynamics	Realizing the unification of Electricity and Magnetism as a single physical concept- Electromagnetism (or Electrodynamics) and that Maxwell's equations express this fact. Understanding various electromagnetic phenomenon (EM Wave in vacuum, conductors, non-conductors, plasma, bounded media, wave guides). Understanding the potential formulation of ED (and its advantages). Understanding generation and nature of radiation (fields) from moving (accelerated) charges. Formulating ED (and writing and performing calculations) within the relativistic framework i.e. four-vector & Tensor notations. Understanding the role of this relativistic formulation and ability to apply it elsewhere.
Practical	The various practicals included in the Physics syllabus of M.Sc. 1st Semester are aimed at understanding (and measuring) the phenomenon/ quantities studied in the theory papers of various other semesters (e.g. LCR, UJT, Transistors, Diodes, DIAC, TRIAC, FET, Amplifiers, Oscillators etc.). The student should use and develop "hand-skills", observation-skills, mathematical tools (analytical, numerical, graphical etc.) to gradually connect theory with experiments.
Atomic & Molecular Physics	Understanding that optical properties of materials and realizing the fact that it are just an application of Quantum Mechanics to atomic/molecular systems. Understanding the atomic and molecular spectra along with their finer features (Fine structure, Vibrational-Rotational spectra). Understanding the effect of electric and magnetic fields on the various spectra via interactions (or charge and/or spin). Understanding the various theories/formulations/models to understand spectra (Vector atom model, LS, JJ coupling schemes, Raman spectroscopy, Heitler-London and Born-Oppenhiemer treatments etc.) Understanding the quantum theory of radiation (Einstein's coefficients) and basic working principle of Lasers.
Solid State Physics	Understanding of the basic (theoretical) ideas involved in the study of Condensed Matter Physics. Understanding the origin of elasticity (and elastic constants) from the properties of the underlying crystal structure. Understanding the interaction of crystals with radiation (X-rays) and the related theoretical framework as well as experimental setup(s) (Diffraction experiments). Understanding the quantum treatment of elastic/sound waves (i.e. the idea

	of phonons and phonon gas etc.) Understanding the thermal properties of solids on the basis of the phonon picture.
Statistical Mechanics	Understanding the (average) microscopic description vs. the macroscopic description (as done in Thermodynamics) for a system with large no. of degrees of freedom. Understanding (and calculating within the framework) the various statistical ensembles and the corresponding (thermodynamic) formulations. Application of the statistical ideas to derive/understand the behavior of gases (ideal as well as real). Understanding the basics of Quantum SM (FD & BE stat) and some simple applications. Understanding blackbody radiation as a gas of photons (i.e statistical treatment- BE statistics).
Quantum Mechanics	Understanding that our world in inherently quantum and so the proper framework to understand it is Quantum Mechanics. "Establishing"/Understanding the basic framework of QM (Schrodinger's equation, wavefunction and probabilistic interpretation, uncertainty relations etc.). Learning to solve the Schrodinger's (time-independent) equation (various one and three dimensional problems). Understanding the various formulations of QM and their equivalence- Schrodinger, Heisnberg (Matrix) and Dirac formulations. Understanding symmetry in QM- Space and Time translation symmetries as well as Rotational symmetry (Angular momentum, Spin, Addition etc.) Understanding the various approximation methods to solve the Schrodinger's equation (Perturbation, Variational method, WKB approximation) and application to different (stationary) state problems. Applying approximation methods to time dependent problems and treatment of radiation (emission and absorption) via such methods (Time dependent perturbation theory, Fermi's Golden Rule, the Semiclassical theory of radiation etc.).
Practical	The various practicals included in the Physics syllabus of M.Sc. 2nd Semester are aimed at understanding (and measuring) the phenomenon/ quantities studied in the theory papers of various other semesters (e.g. Multivibrators, Interferometers, Fresnel's Law, Magnetic susceptibility, Radiation laws etc.). The student should use and develop "hand-skills", observation-skills, mathematical tools (analytical, numerical, graphical etc.) to gradually connect theory with experiments.
Advanced Quantum Mechanics	Understanding, applying and formulating QM at an even deeper level than done earlier (in the QM Course). Applying quantum ideas to understand the scattering of particles. Employing various (approximate) methods- Partial Wave Analysis and the Born approximation. Understanding notion of identical and indistinguishable. Realizing origin of the Pauli's exclusion principle and related notions (Spin-Statistics connection, Permutation symmetry etc.) Formulation (along with the need) of the relativistic version of (NR)

	quantum mechanics. Working out in detail the two basic relativistic wave equations (Klein-Gordon and Dirac equations) and the various associated phenomenon/notions (Plane wave solutions, Negative Energies and Probabilities, Spin of electron and its magnetic moment, The Hole Concept, Particles and Antiparticles etc.) Understanding the need of relativistic quantum fields (towards Quantum Field Theory), Field formulations for the various wave equations via 2nd quantization.
Nuclear Physics	Understanding the atomic nucleus and its various properties along with the experimental tools and techniques of nuclear investigations. Understanding basic properties of the nucleus and the various nuclear models. Understanding the nature of the nuclear force along with experimental setup(s) to study them. Understanding radioactive decay and its various feature. Understanding nuclear reactions by applying (mainly) quantum ideas to them.
Particle Physics	Get a basic understanding of the fundamental constituents of our Universe (the "elementary" particles and the four fundamental interactions). Understanding the gauge principle and role of symmetry (along with ideas of unification). Understanding the common (mathematical) origin of (the various) conservation laws as a manifestation of (some) symmetry. A very basic understanding of the unification of the fundamental interactions- Electroweak and Grand Unifications. Understanding (hadronic) matter as composed of quarks and the "construction" schemes (i.e. various direct-product representation of SU(3)). An overview of the various properties of quarks (and also of the composite mesons and baryons).
Electronics- A	Acquire a basic understanding of electronic principles (analog and digital). Understanding of various oscillator circuits (including multivibrators). Understanding of logic gates (basic, universal and combinational) and the various technologies (RTL, TTL, CMOS, 7400 family etc.) used to implement them. Ability to "construct", simplify and implement various logic functions/circuits (Adder/Sub tractors, Comparators, MUX and dMUX, Coders, Encoders, Decoders). Understanding memory elements (Flipflops- RS, JK, D, Master-Slave, Clocked vs. Unclocked etc.; Registers and Counters) as Sequential circuits. Understanding the various "memory devices" and IC-technologies.
Practical	The various practicals included in the Physics syllabus of M.Sc. 3rd Semester are aimed at understanding (and measuring) the phenomenon/ quantities studied in the theory papers of this semester (mainly Electronics e.g. IC-study (555, 723), Logic circuits (basic- AND/OR/NOT/NAND/XOR etc. to advanced- Adders/MUX/dMUX etc. and memory elements- RS, JK etc.), Microprocessor, SCR, DIAC, TRIAC, GM-counter etc.). The student should use and develop "hand-skills", observation-skills, mathematical

	tools (analytical, numerical, graphical etc.) to gradually connect theory with experiments.
Computational Physics	Acquiring the basic ability to solve physical problems (i.e. equations- algebraic, differential, matrix etc.) using numerical techniques. Learning the techniques/methods of numerical analysis (Interpolation methods, Differential equation solving, Matrix inversion, Integration, Roots of equations etc.) Learning computer programming (FORTRAN) and implementing numerical recipes/algorithms on the computer (usually using iterative methods) to solve problems (including physical problems- Kepler's problem).
Environmental Physics	Learning to understand over surroundings (atmosphere, radiation and environment in general) using the principles of physics. Understanding the atmosphere (its structure, thermodynamics, transport phenomenon, hydrostatic equilibrium, and green house effect). Understanding solar radiation receive on earth (Radiation laws, Matter-Light Interaction, Scattering, Ozone depletion etc.). Understanding water and air pollution (Fluid dynamics, Diffusion, Noise Pollution etc.). Understanding the world energy needs and ways to generate energy for our use (Renewable vs. Non-renewable, Environmental changes and climate due to anthropogenic activities).
Laser & Fiber Optics	Understanding the basic principles of a Laser (semi classical/quantum theory of radiation, Einstein's coefficients, Pumping, Population Inversion, Coherence- spatial and temporal). Knowledge of the various kind of lasers (3 and 4 level systems, He-Ne, Argon, Gas, Solid-state, Semiconductor, Ruby, Nd-YAG etc.) and their features. Getting a basic idea of non-linear optics (harmonic generations, phase matching, self-focusing etc.). Understanding use(s) of laser as an investigating tool (to investigate material properties)- Laser spectroscopy.
Electronics- B (Elective)	Understanding the basic electronic involved in communication electronics. Understanding modulation and demodulation (AM, FM, SSB, Phase- Various circuits to generate and detect). Understanding radio communication (ground and sky propagations, role of ionosphere, Appleton-Hartley theory, Radar and its workings). Understanding Transmission Line (basically EM Waves in conductors). Developing ability to solve related problems (Line parameters, TL-equations, Impedances, SWR, Reflection coefficient etc.). Understanding the various kind of antenna to broadcast and receive radio signals.
Practical/ Dissertation/ Project	The student has to complete a dissertation/project (theoretical and/or experimental) and submit a written report during this last semester. This gives the students some exposure to research and research methodology. Moreover the written report enables the students to write scientific communication. All this is aimed at nurturing them into (possible) future researchers who are capable of- (a) thinking and analyzing critically and clearly (b) adopting the scientific method and (c) working independently.

A.P.B Govt. P.G. College, Agastyamuni, Rudraprayag

Department of Chemistry

Program outcomes, course outcomes and program specific outcomes

Graduation-

Program outcome:- The U.G program under SDSUV provide the understanding of fundamental chemistry from core to their basic application in daily life. At the end of this program student have acquired the knowledge of chemistry of system, surrounding and their positive and negative impact in our daily life and environment.

Course outcome:-

Inorganic chemistry:- This course includes the fundamental study of atomic structure, periodic properties, Nature of chemical bonding, related theories and chemistry of all the elements of periodic table.

Organic chemistry:- This course gives the understanding of structure, bonding, mechanism and stereochemistry of organic compounds and the study of different functional groups in organic molecules. Also it involve the study of biomolecules like carbohydrates, amino acids proteins, vitamins which constitutes of body and monitor the functioning of life.

Physical Chemistry:- This course links physical state with the chemical changes occurs in our surroundings and nature. The chemistry of different states i.e Solid, liquid and gaseous state and colloidal state and branch of science that deals with the quantitative relationship between heat and other forms of energy called thermodynamics and the chemistry related to electrolytes called electrochemistry.

Post-Graduation:-

Program outcome:- The P.G program give the understanding of detail, advanced and fine knowledge of chemistry. This program explore and covers the remaining concept of U.G program and links the text book chemistry to the daily life activities and their application. Importantly this program include the course that deals with the study of interaction of light with matter called spectroscopy which help in the real analysis.

Course outcome:-

Inorganic Chemistry:- This Course encompass the theories and bonding concepts in coordination compound and acids-bases in detail. The interesting chemistry of organometallic compounds.

Organic Chemistry:- This advance organic chemistry course includes the mechanism, energy consideration, stereochemistry and different types of organic reactions in detail.

Physical Chemistry:- This course includes the thermodynamic and kinetic behavior of reaction and various theories for reaction kinetics.

Spectroscopy:- This course deals with the study of interaction of light with matter. The light of different energy cause different type of changes like electronic, vibrational, rotational, nuclear etc. in molecule by interaction with different frequency light. Organic spectroscopy includes NMR, ESR, Mossbauer, IR, UV-visible spectroscopy.

Group Theory and Instrumentation techniques:- Group Theory is the mathematical application to determine the symmetry of molecule and molecular operation and to obtain knowledge of its physical properties and binding nature. Instrumentation techniques involve the understanding about the instruments and techniques used in analysis.

Reagents in organic synthesis and Organometallics :- The important transformation like oxidation-reduction, substitution, addition, elimination in organic reaction have been performed using specific reagents and conditions, this course covers all the important reagents for such transformations.

Organic Photochemistry:- Various reactions takes place by the effect of temperature change called thermal reaction. The reactions which takes place by the effect of light of different frequency and wavelength is called photochemical reaction and mechanism of such reactions studied under photochemistry.

Chemistry of Natural Products:- This course includes the study of natural products like alkaloids, terpenoids, steroids, vitamins and their extraction, purification, chemical effects and applications.

Organic Synthesis:- The synthesis of organic molecules involve various approached and mechanism, new molecules synthesized by mimicking the existing route amd concept. Retrosynthetic or disconnection approach also used to design various drug molecule and biologically active molecule.

Heterocyclic Chemistry:- Heterocyclic molecules are of great importance in medicinal or drug chemistry. This course covers the preparation, properties, reactivity and application of different type of heterocycles

Environmental Chemistry:- This course give idea about environmental terminologies, natural cycles like hydrological, oxygen and nitrogen cycles and composition of atmosphere. Knowledge

about air- water pollution, their cause, effects and outcome. The purification process, the analytical methods involves for measuring the air-water quality parameters and standard.

Program Specific Outcomes:-

Chemistry is a broad area, its important branch of science as everything we do is chemistry! All matter is made up of chemical, even our body is made of chemicals and chemical reaction occur when we eat, breath etc, so it's the study of everything. From starting (like extraction of elements, compounds) to their final state (like polymers, cosmetics, drugs and medicine etc) ready for application involve various chemical processes and purification techniques which were studied under the Program. The advantage of leaning chemistry and acquiring knowledge about the process and techniques involves have great career opportunities in academic as well as industries. As this subject covers broad area, one can pursue a job as a pharmacologist, biochemist, lab technicians, analytical chemist, environmentalist, synthetic chemist, Material scientist, geochemist, chemical engineer in industries and PSUs.

ZOOLOGY

Syllabus/Program Outcomes:-

1. Acquired the knowledge with facts and figures related to various papers in zoology such as Animal Diversity, Taxonomy, Evolution, Genetics, Biochemistry, Endocrinology, Toxicology and Ecology and animal behavior.
2. Understood the basic concepts, fundamental principles, and the scientific theories related to various scientific phenomena and their relevance in the day to day life.
3. Acquired the skills in handling scientific instruments, planning and performing in laboratory equipments.
4. The skill of observation and drawing logical inference from the scientific experiments.
5. Analyze the given scientific data critically and systematically and the ability to draw the objective conclusions.
6. Been able to think creatively (divergent and convergent) to propose novel ideas in explaining facts and figures or providing new solution to the problems.
7. Realize how developments in any science subject help in the development of other science subject and via versa and how interdisciplinary approach helps in providing better solution and new ideas for the sustainable development.
8. Develop various communication skills such as reading, listening, speaking, etc.
9. Realize that pursuit of knowledge is a lifelong activity and in combination with untiring efforts and positive attitude and other necessary qualities leads towards a successful life.

Outcome of Special Papers (PG level)

1. Fishery Science: Students describe the knowledge necessary for professional or academic work in the field of aquaculture and fisheries.

2. Evaluate the importance of diversity as well as the role of social factors (e.g. culture, economics, policy) on aquaculture and fisheries from local to global scales.
3. Demonstrate the basic technical skill necessary for work in aquaculture and fisheries (e.g. data collection and analysis, scientific methods etc.)
4. Create local and global solution to complex challenges in aquaculture and fisheries.

Students become familiar with Earth system and the manner in which they have been modified by human activity over time, especially with regards to coastal ecosystems. Recognize and appreciate the diversity of human culture and their relationship to local and global ecosystems. Develop a personal environmental ethic.

Outcomes of Immunology (PG level)

1. Trace the history and development of immunology.
2. Understood the organization of immune system.
3. Learn how cell culture is used for research in cancer.
4. Understand the vaccines and their importance.
5. Learn how cancer defeats the immune system.

Outcomes of Immunology (PG level)

1. Learn how microorganisms are used as model system to study basic biology, genetics, metabolism and ecology.
2. Learn laboratory skills i.e. preparation of and viewing samples for microscopy, culture techniques, viewing samples in microscopy to identify microorganisms etc.
   Overall students develops hypothesis generation and testing, including the development of theoretical and practical skills in the design and execution of experiments.

Subject Outcomes of Department of Mathematics

Graduation: Three year degree course:

Algebra

The concepts and results of Algebra are fundamental to the study of Mathematics and represent a human achievement of great beauty and power.

Real Analysis

Real Analysis is a major course in Mathematics, traditionally viewed as the difficult subject. Beauty and creativity involved in this important area of mathematics is highly appreciable.

Differential Equations

After completing the course, students will be able to formulate and solve differential equations arising from changes in physical world.

Mechanics

The objective of the course is to understand how one can use theory of calculus of determine centre of gravity, velocity and acceleration of a particle along a cause etc.

Linear Programming

After studying course, students will be able to formulate a given simplified description of a suitable real world problem as a linear programming model in general, standard canonical forms.

Differential and Integral Calculus

Upon completion of this course, students will be able to interpret a function from an algebraic, numerical, graphical and verbal perspective and extract information relevant to the phenomenon modeled by the function, students also will able to study, how to differentiate and integrate standard functions.

Post Graduation: Two year degree course.

Algebra I

Algebra is a core topic for all discipline that uses higher mathematics and logics. It will help student is becoming sophisticated mathematicians.

Real Analysis

A great deal of the course is intended to immerse the student into the world of formal/abstract mathematics in which formal proofs and definitions are used in abundance.

Differential Equation

The course may be considered to occupy is central position from which different lines of development extend in many directions. The theory of differential equation is an important branch of mathematics and essential for understanding many physical and natural phenomena.

Metric Spaces

Metric spaces are vital prerequisite for later mathematics courses including Analysis, Topology, Measure Theory, Complex Analysis etc.

Topology

Topology is a modern branch of geometry. The course is designed to develop an understanding of topological ideas and techniques and their role in analysis.

Measure and Integration I

On successful completion of this course, students will understand: How Lebesgue measure on $\mathbb{R}$ is constructed, the general concept of measure and how measures may be used to construct integrals.

Discrete Mathematics

The primary goal of this course is to provide an introduction to discrete structure for information technology. After studying this course, students will be able to relate computing theory with applications, apply the concepts of Boolean algebra in various areas of Computer Science.

Operation Research I

The problem in Optimisation is the most common applications of mathematics. The main aim of this course is to present different methods of solving Optimisation problem in the area of linear programming, game theory, assignment and transportation problem.

Operation Research II

After completing this course, students will understand how the problems of Economics, Business Management, and other industrial problems may be solved with the help of Inventory Control and Queuing theory.

Measure and Integration II

Investigations in probability theory, partial differential equations, hydromechanics and quantum mechanics often pose problems which require integration over sets. This course gives sufficient answers to such type of problems.

Abstract Algebra II

The main aim to study this course is it to understand a close relationship between the roots of a polynomial and its Galois group.

Numerical Analysis

This course aims to provide students with the techniques for finding approximate numerical solution to the mathematical problems for which exact or analytical solutions are unavailable or inappropriate.

Complex Analysis

This course aims to provide an understanding of the basic facts of complex analysis, in particular the nice properties enjoyed by the derivatives and integrals of function of a complex variable; and to show complex analysis can be used to evaluate real integrals.

Mechanics

Mechanics is the oldest branch of Physics deplanes and is well important in the discipline of Mathematics. It is, in fact a course in Classical Mechanics. Students can understand the applications of fundamental conservation principles to analyze mechanical system.

Algebraic Coding Theory

The objective of the course is to teach the students how to produce algebraic codes based on the methods of groups and finite fields and to make the students familiar with some of the most widely used codes and their applications.

Number Theory

The aim of the course is to give an introduction to elementary number theory, to show how certain number theoretical theorems can be applied to solve simple Diophantine equations.

Fluid Dynamics

Fluids have the ability to transport matters and its properties as well as transmit force; therefore Fluid Dynamics is an important subject that is particularly open to cross fertilization with other Sciences and disciplines of Engineering.

Fuzzy Set Theory

Upon successful completion of this course, students should be able to understand basic knowledge of Fuzzy sets, fuzzy relations, elements of fuzzy arithmetic and fuzzy logic.

Fundamental Analysis

Many of the topics studied in this course have applications on Approximation theory, Operator's theory and other areas of mathematics. At the end of the course, the students will be aware to interplay of algebra and topology.

Differential Geometry

Differential Geometry is a mathematical discipline that uses the method of Differential and integral calculus, as well as linear and multi linear algebra, to study problems in Geometry. The theory of plane and space curves and of the surface in the three-dimensional Euclidean space formed the basis for its initial development in the 18th and 19th century.

Department of English

Programme and course Outcome (2021-2022)

Undergraduate

B.A 1st Year

Paper1: Prose

Students get introduced by different kind of prose writers and understand the fundamental acts of reading in prose. It enhances their writing skill in prose genre.

Paper II: Shakespearean Drama

Students learn about drama movements in Europe especially the Renaissance, which was a generally known as Shakespearean age or period. Students also get to understand major literary form such as tragedy or comedy.

B.A 2nd Year

Paper I: Poetry

Students are trained in getting aquatinted with modern poetic forms and genres through classroom lectures and discussions.

Paper II: Fiction

Students are encouraged to read texts followed by critical essays and develop their ideas and arguments around British and Indian Fictions.

B.A III Year

Paper I: Indian and American Poetry

Students get introduced to Indian literary traditions such as poems and Epics. Through this course they are able to locate American Poetry as a second world literary site.

Paper II: Drama

This course introduced to different genre of American literature. It represents modern drama in English Literature.

Programme Outcome

Po 1: the programmme educates students in both the artistry and utility of the English language and literature through an aesthetic study of Language and the various historical and contemporary forms of texts.

Po2: The programme helps student for their personal interest in literature, and develops their reading and writing skills in English.

M.A in English (4 Semester)

Semester1

Paper I: English Literature from Chaucer to John Milton

This course familiarizes students with the early modern world, earlier called the Renaissance, through poetry, fiction and philosophy. It familiarizes students with literary texts and intellectual debates of 16^{th} or 17^{th} century Europe.

Paper II: Drama Excluding Shakespeare

The main features of Shakespeare drama taught: liberty from the unities, philosophical complexity. This course introduced students with drama of the 16^{th} or 17^{th} centuries with a focus on the play of Shakespeare.

Paper III: Early Humanist's Literature

Students familiarize with humanist writers of classical literature and regions. It introduces the students to idea of classicism.

Paper IV: English Prose

Students learn how to analyses a text or textual passages (prose). Students are encouraged to read texts followed by critical essays.

M.A 2^{nd} Semester

Paper V (William Shakespeare)

The student exposed to the main contemporary critical approaches to Shakespeare: Feminist, new historicist. They learn about drama as well as the generic differences between the tragedy and the comedy.

Paper VI (18th Century Literature)

To uncover the radical potential of poetry, A Foundational level of fluency with the basics of poetry will have been achieved.

Paper- VII: (American Literature)

This introductory course offers insights into the literatures of the Americas written in English. This course will introduce students to writings across the Americas.

Paper VIII: (19^{TH} Century literature)

Students will be trained to understand the continuities between the nineteenth century and high modernity.

Paper –IX (Dissertation and Viva –Voce)

Discussing Exam Questions and Making students give presentations.

III Semester

Paper- X (20^{th} century poetry)

Students will gain a critical appreciation of varied genre of poetry and their contexts building upon skills and insights they acquired in poetry.

Paper- XI (Indians Writing in English)

The course aims to give students a glimpse of a vast diversity of modern Indian writings. Students also read Rabindranath Tagore as a poet and understand his views on humanism.

Paper XII (b) Literary Criticism –II

To build on students understanding about the principals of western European philosophy and theory. Students will gain familiarity with a range of twentieth and twenty-first century theoretical approaches.

Paper- XIII (b) (Literature and Gender)

This course will familiarise students with theorising about gender, be it feminism, queer studies or masculinity studies. The students will be taught to interpret a text and read social change through the lens of gender.

IV Semester

Paper- XIV (20^{TH} Century Drama)

This course is a genre- based and performance oriented course. It provides learners with an overview of formative theatrical movements in Europe. The plays included focus on innovative performance trends that began at the end of the twentieth century and evolved into diverse forms in the twentieth century.

Paper – XV (Literary Criticism)

Students will acquire skills in the handling of theoretical issues related to the study of literature and culture.

Paper- XVI (a) (Literature of Indian Diaspora)

Students will get a critical introduction to the fascinating yet highly contested field of diasporic literature and theory.

Paper- XVII (b) (Indian Literature in Translation)

This course introduces students to literary texts from a range of regional, cultural, social and political locations within India since independence. It train the students in a multi-genre approach to Dalit writings also.

Paper- XVIII (Dissertation and Viva Voce)

To enable the students to analyse texts and identify the generic distinctions across prominent milieus and regions. To enable students to understand various paradigms of research, its tools, ethics and challenge related to English studies and related fields and develop creative and academic skills in them.

Subject Outcomes of Department of Mathematics

Graduation: Three year degree course.

Algebra

The concepts and results of Algebra are fundamental to the study of Mathematics and represent a human achievement of great beauty and power.

Real Analysis

Real Analysis is a major course in Mathematics, traditionally viewed as the difficult subject. Beauty and creativity involved in this important area of mathematics is highly appreciable.

Differential Equations

After completing the course, students will be able to formulate and solve differential equations arising from changes in physical world.

Mechanics

The objective of the course is to understand how one can use theory of calculus of determine centre of gravity, velocity and acceleration of a particle along a cause etc.

Linear Programming

After studying course, students will be able to formulate a given simplified description of a suitable real world problem as a linear programming model in general, standard canonical forms.

Differential and Integral Calculus

Upon completion of this course, students will be able to interpret a function from an algebraic, numerical, graphical and verbal perspective and extract information relevant to the phenomenon modeled by the function, students also will able to study, how to differentiate and integrate standard functions.

Post Graduation: Two year degree course.

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Algebra is a core topic for all discipline that uses higher mathematics and logics. It will help student is becoming sophisticated mathematicians.

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A great deal of the course is intended to immerse the student into the world of formal/abstract mathematics in which formal proofs and definitions are used in abundance.

Differential Equation

The course may be considered to occupy is central position from which different lines of development extend in many directions. The theory of differential equation is an important branch of mathematics and essential for understanding many physical and natural phenomena.

Metric Spaces

Metric spaces are vital prerequisite for later mathematics courses including Analysis, Topology, Measure Theory, Complex Analysis etc.

Topology

Topology is a modern branch of geometry. The course is designed to develop an understanding of topological ideas and techniques and their role in analysis.

Measure and Integration I

On successful completion of this course, students will understand: How Lebesgue measure on $\mathbb{R}$ is constructed, the general concept of measure and how measures may be used to construct integrals.

Discrete Mathematics

The primary goal of this course is to provide an introduction to discrete structure for information technology. After studying this course, students will be able to relate computing theory with applications, apply the concepts of Boolean algebra in various areas of Computer Science.

Operation Research I

The problem in Optimisation is the most common applications of mathematics. The main aim of this course is to present different methods of solving Optimisation problem in the area of linear programming, game theory, assignment and transportation problem.

Operation Research II

After completing this course, students will understand how the problems of Economics, Business Management, and other industrial problems may be solved with the help of Inventory Control and Queuing theory.

Measure and Integration II

Investigations in probability theory, partial differential equations, hydromechanics and quantum mechanics often pose problems which require integration over sets. This course gives sufficient answers to such type of problems.

Abstract Algebra II

The main aim to study this course is it to understand a close relationship between the roots of a polynomial and its Galois group.

Numerical Analysis

This course aims to provide students with the techniques for finding approximate numerical solution to the mathematical problems for which exact or analytical solutions are unavailable or inappropriate.

Complex Analysis

This course aims to provide an understanding of the basic facts of complex analysis, in particular the nice properties enjoyed by the derivatives and integrals of function of a complex variable; and to show complex analysis can be used to evaluate real integrals.

Mechanics

Mechanics is the oldest branch of Physics deplanes and is well important in the discipline of Mathematics. It is, in fact a course in Classical Mechanics. Students can understand the applications of fundamental conservation principles to analyze mechanical system.

Algebraic Coding Theory

The objective of the course is to teach the students how to produce algebraic codes based on the methods of groups and finite fields and to make the students familiar with some of the most widely used codes and their applications.

Number Theory

The aim of the course is to give an introduction to elementary number theory, to show how certain number theoretical theorems can be applied to solve simple Diophantine equations.

Fluid Dynamics

Fluids have the ability to transport matters and its properties as well as transmit force; therefore Fluid Dynamics is an important subject that is particularly open to cross fertilization with other Sciences and disciplines of Engineering.

Fuzzy Set Theory

Upon successful completion of this course, students should be able to understand basic knowledge of Fuzzy sets, fuzzy relations, elements of fuzzy arithmetic and fuzzy logic.

Fundamental Analysis

Many of the topics studied in this course have applications on Approximation theory, Operator's theory and other areas of mathematics. At the end of the course, the students will be aware to interplay of algebra and topology.

Differential Geometry

Differential Geometry is a mathematical discipline that uses the method of Differential and integral calculus, as well as linear and multi linear algebra, to study problems in Geometry. The theory of plane and space curves and of the surface in the three-dimensional Euclidean space formed the basis for its initial development in the 18th and 19th century.

B. Ed Department –

Subject Outcome Depaertment of B.Ed

B.Ed two Year Course- **B.Ed first Year**

Course 1: Childhood and Growing Up

1. Explain Educational psychology.

2. Understand children of different ages by interacting and observing them in diverse social, economic and cultural context.

3. Explain childhood, child development and adolescence.

4. Describe theories of Child development.

5. Understand personality and its measurement.

6. Describe mental health & Hygiene and its importance in school.

7. Understand the role of the family and the school in the child's development.

8. Understand Personality, its theory and assessment.

Course 2: Contemporary India and Education

1. Contextualize contemporary India and education.

2. Evolve a deeper understanding of its purpose and its relationship with society and Humanity.

3. Understand the classroom as a social context.

4. Provide a setting for interaction, generation of dialogue and the opportunity to appreciate diverse perspectives of issues.

5. Critically analyse human and child rights.

6. Learn about policy debates overtime the implementation of policies and actual shaping of school education

Course 4 Language across the Curriculum

- 1. Understand the language background of the students.

2. Create sensitivity to the language diversity in the classroom.

3. Understand the nature of classroom discourse and develop strategies for using oral language in the classroom.

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4. Understand the nature of reading comprehension and writing in specific content areas.

5. Explain the Nature of expository texts and narrative texts.

6. Describe journals and Communication.

7. Understand writing with a sense of purpose, writing to learn and understand. 8. Understand function of language and how to use it as a tool.

Course-5 Understanding Disciplines & Subjects Code:

1. Understand Notion, types and approaches of knowledge.

2. Understand emergence of discipline and subjects in social, political and intellectual contexts.

3. Understand theory related to human needs change with time.

4. Reflect on the nature and role of disciplinary knowledge and notion of knowledge.

5. Understand theory of subject content, selection of content, curriculum, syllabus and text books.

6. Comprehend learner oriented discipline/subject.

7. Describe role of ICT in Effective Curriculum Transaction

Pedagogy of Hindi

1. भाशा कि विभिन्न भूमिकाओ को

2. हिन्दी भाषा की भूमिका, महत्व तथा इसकी सास्कृतिक पृठभूमि को

3. हिन्दी भाषा के वाक्य विन्यास, व्याकरण तथा उच्चारण की षुद्धता के महत्व को

4. स्कूल की भाशा, बच्चो की भाशा और समझ के बीच के संबंध

5. भाशा सीखन के तरीके और प्रकिया को

6. हिन्दी भाशा के मूल्याकन की प्रक्रिया को

7. हिन्दी भाषा के विभिन्न पाठ योजनाओ का महत्व को।

8. हिन्दी भाषा षिक्षण मे क्रियात्मक अनुसंधान के महत्व को।

9. भाशा और विचारो की स्वतत्र अभिव्यक्ति को

Pedagogy of Sanskrit

1. भाषा कि विभिन्न भूमिकाओं को
2. संस्कृत भाषा की भूमिका महत्व तथा इसकी सांस्कृतिक पृष्ठभूमि को।
3. संस्कृत भाषा के शब्द विन्यास, व्याकरण तथा उच्चारण की शुद्धता के महत्व को।
4. संस्कृत भाषा के मूल्यांकन की प्रक्रिया को
5. संस्कृत भाषा के विभिन्न पाठ योजनाओं का महत्व को।
6. संस्कृत भाषा शिक्षण में क्रियात्मक अनुसंधान के महत्व को।

Pedagogy of English

1. Explain nature and importance of the English as a school subject and its relation to other school subjects.
2. Understand about the teaching of poetry, prose and drama;
3. Identify methods, approaches and materials for teaching English at various levels in the Indian context.
4. The required skills and their inter-links per mastering English.
5. Develop and use teaching aids in the classroom both print and audio-visual material, and ICT (internet and computer technology).
6. Understand need and functions of language lab.
7. The techniques of obtaining feedback for self- evaluation and evaluation of students.
8. To teach and evaluate basic language skills such as listening, speaking, reading and writing and integrate them for communicative purposes.
9. Comprehend Action research and its importance in English teaching.

Pedagogy of Mathematics

1- Understand and appreciate the use and significance of Mathematic in daily life.
2- - Learn various approaches of teaching Mathematics and to use them judiciously.
3- - Know the methods of planning instruction for the classroom
4- - Canalize, evaluate, explain and reconstruct their thinking about mathematics.
5- Construct appropriate assessment tools for evaluating mathematics learning;
6- Focus on understanding the nature of children's mathematical thinking through direct observations of children's thinking and learning processes.
7- Conduct action research.

Pedagogy of Physical Sciences

1. Understand the nature, scope values and objectives of teaching Physical science at secondary level.

2. Develop insight on the meaning and nature of Physical science for determining aims and strategies of teaching- learning and Integrate the science knowledge with other school subjects.

3. Identify and relate everyday experiences with learning of science.

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4. Use effectively different activities / experiments/ demonstrations / laboratory experiences for teaching-learning of science

5. Analyze the contents of science with respect to pots, branches, process skills, knowledge organization and other critical issues

6. Understand the role and use of laboratory experiences for teaching-learning of Science

7. Use effectively different activities/learning resources for teaching-learning of Science

8. To use effectively the different approaches in teaching of Science

Pedagogy of Biological Sciences

1. Develop insight on the meaning and nature of Biological sciences.

2. Determine aims and strategies of teaching Biological sciences.

3. Identify and relate everyday experiences with learning of Biological sciences.

4. Appreciate various approaches of teaching- learning of Biological sciences.

5. Develop competencies for teaching, learning of biological science.

6. Use effectively different activities / experiments/ demonstrations / laboratory experiences for teaching-learning of Biological science.

7. Formulate meaningful inquiry experiences, problem-solving situations, investigatory and discovery learning projects.

8. Construct appropriate assessment tools for evaluating learning of biological science.

9. Stimulate curiosity, inventiveness and creativity in biological science.

Pedagogy of Home Science

1. Understand the aims and objectives of home science.

2. Understand the nature and importance of home science and its correlation with other subjects.

3. Analyze school syllabus in relation to its applicability to practical situation.

4. Utilize effectively the instructional material in teaching home science.

5. Construct test items to measure objectives belonging to various cognitive levels.

6. Identify specific learning difficulties in home science and to provide suitable remedial individual instructions.

Pedagogy of Social Study

1. To develop an understanding of the nature of Social Study.
2. Understand matters of both content and pedagogy in the teaching of Social Study.
3. Define Social Study and explain its relative position in the Syllabus.
4. Understand the aims and objectives of teaching of Social Study.
5. Review the Text-book of Social Study.
7. Apply appropriate methods and techniques of teaching particular topics at different levels.
8. Prepare, select and utilize different teaching aids.
9. Acquire basic knowledge and skills to analyse and transact the curriculum effectively.
10. To sensitize and equip student teachers to handle Social issues.

Pedagogy of Economics

1. Understand the aims and objectives of teaching Economics.
2. Define Economics and explain its relative position in the Syllabus.
3. Develop an understanding of the nature of Economics.
4. Understand content and pedagogy in teaching of Economics.
5. Prepare Lesson plans for different classes in Economics.
6. Critically evaluate the existing school syllabus of Economics Teaching.
7. Review the Text-book of Economics.
8. Prepare, select and utilize different teaching aids.
9. Understand the concept of multiple assessment techniques.

Pedagogy of Commerce Course

1. Develop an understanding of the nature of Commerce.

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2. Understand matters of both content and pedagogy in the teaching of Commerce.

3. Define Commerce and explain its relative position in the Syllabus.

4. Understand the aims and objectives of teaching of Commerce.

5. Prepare Lesson plans for different classes.

6. Develop knowledge about the basic principles governing construction of Commerce Curriculum.

7. Critically evaluate the existing school syllabus of Commerce Teaching.

8. Review the Text-book of Commerce.

9. Apply appropriate methods and techniques of teaching particular topics at different levels.

10. Prepare, select and utilize different teaching aids.

Year -2021-2022

Department of sociology

1-Program Outcomes-

Program outcome Sociology learning provides initial knowledge about society. Social life and social interactions. It prepares an individual to social life by inculcating values, morals, and manners. It gives knowledge about communities in which he interacts like rural urban and tribal communities.

3- Program Specific Outcomes-

Sociology seeks to understand all aspects of human social behavior, including the behavior of individuals as well as the social dynamics of small Group, large organizations, commonalities, institution, and entire societies. Sociology provides an intellectual background for students considering careers in the professions or business. An Graduate student of sociology should able to develop:

- Critical Thinking : The program seeks to develop in students the sociological knowledge and skill that will enable them to think critically and imaginatively about society and social issues.
- Sociological understanding: The ability to demonstrate sociological understandings of phenomena, for example, how individual biographies are shaped by social structures, social institutions, cultural practices, and multiple axes of difference and inequality.
- Ethical and social Responsibility; students have to learn about institution, folkways, mores, culture, social control, social inequality, population composition, population policy, society and culture of india . All these help to instill among the students of sociological a sense of ethical and social responsibility.

- Professional and careers opportunities. Students will have the opportunity to join Professional and careers in sociology and allied fields. Sociology provides an intellectual background for students considering careers in business, social services, public policy, government service, nongovernmental organizations, foundations, or academia . this programme lays foundation for further study in sociology, social work, Rural Development, Social welfare and in other allied subjects.

3- Course Outcomes- **B.A 1 year**

1st paper - Introduction to sociology. and structure of Indian society.

The course is intended to introduce the students to a sociological way of thinking. It provides an understanding of the discipline of Sociology and sociological perspective. It also provides foundation for other more detailed and specialized courses in sociology. Students will be able to Define Sociology and demonstrate nature, scope and subject-matter of Sociology.• Demonstrate how Sociology differ from and similar to other social sciences and their• areas of interdependence. Acquaint themselves with the basic concepts of Sociology like society, community,•

2nd paper- Basic sociological concepts and Indian social system.

association, culture, social change, social stratification etc. Know the basic social institutions like family, marriage, kinship in a scientific way.• Understand and demonstrate how self develops through various process of interaction.• Demonstrate how societal and structural factors influence individual behaviour. Explain social change and the factors affecting social change. Realize the importance of• cultural lag to understand social change.

B.A 2nd year

paper 1st Process of social change and social change india.

Sociology of Social Change-this course aims at providing a theoretical knowledge on social change and development. It will enable the students to understand the processes of change and development in society. This course is expected to clarify and broaden the structure of Indian society and changing aspects with the process. Social change has central concern of sociological study. Change has its pattern which is spelt out by various factors. This paper also provides a whole idea to the students about the process, theories and factors of social

change. They can relate their experience with theoretical explanation. After completing the course, students can - Derive knowledge about the meaning, nature, forms and patterns of change. - Get an idea about the theories and factors of social change. - Learn about development programmes in India and also analyse its success and failures. - Learn about development issues of ecology and environment

Paper 2nd Social research and techniques of data collection and statistical analysis.

The course is an introductory course on how research is actually done. With emphasis on formulating research design, methods of data collection, and data analysis, it will provide students with some elementary knowledge on how to conduct both, quantitative and qualitative research. Field work is an applied part of social research methods. This paper aims to aquaint students with empirical field data collection, analysis and writing analytical and standard dissertation or research report in sociology. From the course students will able to learn about Meaning, scope, types and significance of Social Research.• Importance of research design in Social Research and how to formulate it.•

B.A 3rd year

1st Paper

Classical and Indian sociological thought)

This course provides an understanding of the different sociological thoughts and the students will be able to - Understand of founding father of sociology like Auguste Comte and his different contributions on thoughts like law of three stages, social statics, social dynamics, cybernetic hierarchy of sciences, positivism. - Understand Herbert

2nd Paper

Rural sociology and Indian Rural social Problem

The course explores substantive issues in Rural Sociology. It gives attention to Indian themes. Studying the course students will be able to Define Rural Sociology and demonstrate nature, subject-matter and importance of

• studying Rural Sociology. Understand and analyze social, economic and political aspects of rural society.

• Demonstrate how caste system operates and its importance in rural society.

- Define and demonstrate democratic decentralization of power and importance of
- Panchayati Raj Institution in bringing about changes in rural society. Understand the changes that are taking place in rural society with reference to agrarian
- reforms and rural development program.

Indian sociological thinkers

The course aims to provide a general introduction to development of sociological thought in and influence of ancient, medieval, western on sociological development in India; pre independence, post independence and contemporary sociological thought in India. In the completion of this course the student will be able to: - Understand important contributions on Indian social thought from Swami Vivekananda, M.K. Gandhi, Radhakamal Mukherjee, G.S. Ghurye, Louis Dumont. - Understand structural and functional perspective of M.N. Srinivas, S.C Dube, D. P. Mukherji, A.R. Desai, Ramkrishna Mukherjee.

APB GOVERNMENT PG COLLEGE AGASTYAMUNI

DEPARTMENT OF POLITICAL SCIENCE

PROGRAMME AND COURSE OUTCOME (2021-2022)

Undergraduate:

B.A. Ist year

Paper 1- Political theory

Course Outcome- This course on political theory aims to provide students a sound understanding of political science, including various approaches, ideological perspectives and relationship with other Social Sciences. Students will be able to describe and comprehend various key concepts related to the discipline and develop their own understanding of politics. They will understand what power is and how it functions in society and politics. They will learn to comprehend and explain various theories and contemporary debates in democracy, liberty, equality.

Paper 2 : Comparative Government and politics

To familirize students with the constituion of other countries as well so that they can acquire analytical skilla to compare our constituion with that of other contriea

B.A. 2nd Year

Paper 1 Representative political thinkers

Through this we can examines the views of some of the most prominent western political philosophers both Western and Indian and how their responses to political issues profoundly affected the subsequent political thought.

Paper 2 Indian government and politics

The course conveys the whole body of knowledge to the students about Indian Government and Politics. This encourages the students to think and analyse about the politics of our nation. Nad in addition to it it is very useful as vast majority of questions in government competitive exams comes from this section

Ba 3rd year

Paper 1- International Politicsand relations

Inculcates knowledge of various concepts of International Relations for example Collective

Security, Balance of Power etc. It also helps to understand various process of International Relation.

It enables the students to understand about the various issues of International Relations like global terrorism, issues between India and different neighboring countries like Pakistan, Bangladesh and China. It also gives knowledge about various other aspects like New International /Economic Order and Studies about Global Organizations like WTO, Regional organisations like ASEAN , Oau etc .It helps the students to analyze all the issues which the current world is dealing with.

Paper 2: Elements of public administration

This paper helps in understanding varing processes involved in public policy making and administration. It is also helpful for civil service exam perpration.

Programme outcome:

PO1-Understanding the inter relationship between policy decisions and its effects on society. This is achieved through a comprehensive teaching of the practice of public administration in India.
PO2- Critical thinking skills- This programme in political science helps in enhancing critical skilla of students by making them aware of conceptual topics which they deal on everyday basis like justice , Equality, Liberty etc
PO3 - Effective citizenship: the course curriculum inculcates among students a basic understanding of the rights and duties of citizenship and thereby to act as responsible citizens by studing constitution deeply and upholding its values both in letter and spirits.
PO4 - Gaining knowledge of both national as well as international political issues and analysing it in unbaised way.

M.a. in political science(4 semester)

Semester 1 -

Paper 1 :Western Ancient and Mediavel Political Thought

Understanding text-context relationship of political thought and of the contemporary relevance of key philosophical ideas.This helps in contextualizing the concepts and ideas as well as philosophical connections with more specialized domains of Political Science.

Paper 2 : Comparative Politics

: Helps in acquiring skills to compare the politics among nations .And applying the knowledge gained in understanding the politics of different nations and the political trends.
Paper 3 : Indian Political System

Helps in meaningfully participating in political debates and the ability to critically analyze the major issues in Indian politics.
To understand and form objective opinions about the issues in Indian politics.

Paper 4: Local Self Government in India

Helps in understanding the key problems at grass root level and making students aware of locla level issue and politics.

Semester 2 -
Paper 1: Western Modern Political Thought
Gaining different perspective about keu concept of different thinkers.

Paper 2: Modern Political Systems

Helps in ganing knowlege about political system across world. This in turn helps in comparing our own country's conatituion with that of world.
Paper 3: India's Foreign Policy
Helps in gaining the ability to understand the objectives, goals and foreign policy trends at bilateral and multilateral levels.
And to apply the knowledge and predicting outcome as well as evaluating foreign policy decisions and strategies.

Paper4: Research Methodology
Gaining knowledge in doing
research in Political Science.
Also helps in NTA NET PAPER 1 and in Phd.

Paper 5: Viva-Voce

Helps students in presentation skills as viva is taken by external examiner.

Semester 3 -
Paper 1 : Indian Political Thought
Helps in understanding and contextualizing the ideas to contemporary realities.
And Developing the ability to critically assess and form opinions on philosophical and ideological issues relevant to contemporary India.

Paper2: International Relations
students will develop theoretical insights on international relations and global politics. This will help them in undertaking academic assignments and research projects related with international issues which are becoming very salient in today's globalized world.

Paper 3: Public Administration

To apply the knowledge gained in understanding the role of administration.Ability to use knowledge in administrative careers and in the field of policy science.

Paper 4: International Organization

Understanding the contemporary relevance of the UN and its relationship with other International Organization.

Semester 4-

Paper 1:Theories of International Politics

The students gain knowledge about different issues and perspectives of global politics.

Paper 2: International Law

Helps in understanding the concepts and subjects of International Law and To have an understanding of the nuances of International Law.

Paper 3: Political Philosophy of Mahatma Gandhi

Heps learn gandhian ideas and helps in understanding its relevance in the current era .

Paper 4: Human Rights

Helps in application of the knowledge of human rights issues and violations.

Paper 5: Dissertation / Viva

Students have an option of preparing dissertation or viva.

Dissertation helps sturents in enhacing reseewrch and questioning skills of students. It will further help students during their phd or if they want to join a research project or to condut their own research.

Programme outcomes-

1- This post graduate programme in political science helps in gaining in depth knowledge of the subject.

2.New course like human rights , philosophy of mahatma gandhi , International Law has been included it in which is very relevant in current time.

3.This programme will equip students with critical and analytical skills which will not only be good

for their accademics but will make them a well informed citizen.

4. This programme will provide learners with knowledge and skills needed to prepare for a professional career as a teacher, administrator, political scientists, lawyers etc. It also provides basic knowledge about the basics of political education.It trains students about the politics and government at local, state, national and global levels.

5. A major chunk of syllabus has beeen covered which will help students prepare for NET exam , civil services optional as well as general studies plus other group C exam.

अ० प्र० ब० राजकीय स्नातकोत्तर महाविद्यालय अगस्त्यमुनि (रुद्रप्रयाग) हिन्दी विभाग

स्नातक स्तर:-

बी० ए० हिन्दी विषय के अंतर्गत तीन वर्षीय पाठ्यक्रम में कुल 6 प्रश्नपत्र सम्मिलित हैं-

स्नातक प्रथम वर्ष प्रथम प्रश्नपत्र – "हिन्दी भाषा एवं साहित्य"

स्नातक प्रथम वर्ष का विद्यार्थी चाहे इंटरमीडिएट स्तर पर विज्ञान वर्ग का हो, या कला वर्ग का या फिर वाणिज्य वर्ग का हो, भाषा की व्याकरणिक एवं साहित्यिक समझ उसे विषय विशेष को समझने में सहायता प्रदान करती है। हिन्दी भाषी क्षेत्र के लगभग 70 % विभिन्न विषयों के विद्यार्थी भाषा का माध्यम हिन्दी चयनित करते हैं। अतएव यह प्रश्नपत्र हिन्दी भाषा को व्याकरणिक स्तर तक समझने में सहायक है। साथ ही विभिन्न प्रतियोगी परीक्षाओं में सफल होने के लिए भी इसका अनिवार्य रूप से गहन अध्ययन किया जाना चाहिए। साथ ही इस प्रश्नपत्र में साहित्य के स्वरुप एवं विविध विधाओं तथा उनके तत्वों की सम्पूर्ण जानकारी विद्यार्थियों के लिए अत्यंत उपयोगी है।

स्नातक प्रथम वर्ष द्वितीय प्रश्नपत्र – "काव्यांग एवं हिन्दी कविता"

काव्य के विभिन्न अंगों – रस , छन्द , अलंकार , शब्दशक्ति को गहनता से समझकर ही साहित्य का वास्तविक रसास्वादन संभव है। व्याकरणिक स्तर पर विभिन्न प्रतियोगी परीक्षाओं में इससे सम्बंधित प्रश्न आवश्यक रूप से पूछे जाते हैं। साथ ही इस प्रश्नपत्र के द्वारा हिन्दी साहित्य के प्रारम्भिक युगों की कविताओं के स्वरुप से परिचित होकर विद्यार्थी में काव्य-सृजन की क्षमता का भी विकास होता है।

स्नातक द्वितीय वर्ष प्रथम प्रश्नपत्र – "गद्य एवं नाट्य साहित्य"

उपन्यास , कहानियों , निबंध , नाटक , एकांकी , रेखाचित्र , यात्रा-संस्मरण की पाठ्यवस्तु का अध्ययन करके विद्यार्थी में विविध प्रकार की गद्य विधाओं के शिल्प और संवेदना को समझने के पश्चात् गद्य साहित्य-सृजन करने की क्षमता का विकास होता है। साथ ही इन प्रतिष्ठित लेखकों के उपन्यास , कहानी , निबंध , नाटक , एकांकी , रेखाचित्र , यात्रा-संस्मरणों को पढ़कर समाज के विभिन्न पक्षों – राष्ट्रभक्ति , स्त्री विमर्श , दलित विमर्श , भूख , गरीबी , लाचारी , ग्रामीण परिवेश , नगरीय परिवेश , राजनैतिक विचार आदि का समावेश विद्यार्थी को जीवन जीने की एक नवीन दृष्टि प्रदान करता है।

स्नातक द्वितीय वर्ष द्वितीय प्रश्नपत्र – "आधुनिक हिन्दी कविता"

काव्य विकास-क्रम में आधुनिक हिन्दी कविता के स्वरुप एवं उसके विकास के चरणों से विद्यार्थी परिचित होते हैं, जिससे वे आधुनिक स्तर पर काव्य-सृजन की क्षमता को वृद्धिगत कर सकें।

स्नातक तृतीय वर्ष प्रथम प्रश्नपत्र – "प्रयोजनमूलक हिन्दी"

इसका दूसरा नाम कामकाज़ी हिन्दी भी है। विभिन्न सरकारी कार्यालयों में अनिवार्य रूप से इसका प्रयोग होता है। संक्षेपण , प्रारूपण , टिप्पण , पल्लवन , अनुवाद , पत्रकारिता , पारिभाषिक शब्दावली , जनसंचार माध्यमों आदि का अध्ययन इसके अंतर्गत किया जाता है। विभिन्न सरकारी कार्यालयों के विभागों एवं अनुभागों में इससे सम्बन्धित कार्य प्रतिदिन होते हैं। यह रोजगारपरक हिन्दी भी कहलाती है।

स्नातक तृतीय वर्ष द्वितीय प्रश्नपत्र – "जनपदीय भाषा साहित्य"

गढ़वाली एवं कुमाऊँनी साहित्य के उद्भव एवं विकास का अध्ययन करके विद्यार्थी क्षेत्रीय भाषा को गहनता से समझता है। हिन्दी भाषा के साथ ही साथ अपनी क्षेत्रीय भाषा के साहित्य एवं व्याकरण का ज्ञान होना भी साहित्य के विद्यार्थी के लिए अत्यंत आवश्यक है। लोकगीत , लोककथाएं , लोकगाथाएं हमें उत्तराखंड की सामाजिक , राजनैतिक , धार्मिक एवं आर्थिक परिस्थितियों से परिचित कराकर पहाड़ के जनजीवन एवं मानवीय मूल संवेदनाओं को समझने में सहायक होती हैं।

स्नातकोत्तर स्तर:-

एम० ए० हिन्दी विषय के अंतर्गत द्वि-वर्षीय पाठ्यक्रम में कुल 18 प्रश्नपत्र सम्मिलित हैं। सभी प्रश्नपत्र विभिन्न राज्यस्तरीय एवं राष्ट्रीय स्तरीय प्रतियोगी परीक्षाओं में सफल होने में सहायक हैं।

प्रथम सेमेस्टर

प्रथम प्रश्नपत्र- हिन्दी साहित्य का इतिहास (आरम्भ से रीतिकाल तक)

हिन्दी साहित्य के इतिहास के प्राम्भिक युगों को उनके प्रवृत्तिगत एवं तत्कालीन परिस्थितियों के आधार पर विस्तृत अध्ययन करके विद्यार्थी का साहित्यिक ज्ञान समृद्ध होता है।

द्वितीय प्रश्नपत्र- आदिकालीन एवं निर्गुण काव्य

आदिकालीन एवं भक्तिकालीन कवियों के काव्य का अध्ययन करके विद्यार्थियों की काव्य-सृजन क्षमता विकसित होती है।

तृतीय प्रश्नपत्र- मध्यकालीन सगुण एवं रीतिकालीन काव्य

भक्तिकालीन एवं रीतिकालीन कवियों के काव्य का अध्ययन करके विद्यार्थियों की काव्य-सृजन क्षमता में वृद्धि होती है।

चतुर्थ प्रश्नपत्र- हिन्दी साहित्य का इतिहास (भारतेन्दु युग से अब तक)

स्नातकोत्तर स्तर पर युगीन परिस्थितियों एवं प्रवृत्तियों के आधार हिन्दी साहित्य के इतिहास का विस्तृत अध्ययन करके विद्यार्थी का साहित्यिक ज्ञान समृद्ध होता है।

द्वितीय सेमेस्टर

पंचम प्रश्नपत्र- भारतीय काव्यशास्त्र और हिन्दी आलोचना

विभिन्न काव्यशास्त्रीय सिद्धांतों- रस सिद्धांत , अलंकार सिद्धांत , वक्रोक्ति सिद्धांत , ध्वनि सिद्धांत , औचित्य सिद्धांत का अध्ययन करते हुए काव्य को विभिन्न आलोचनात्मक प्रवृत्तियों की कसौटी पर परखने में विद्यार्थी को सहायता मिलती है।

षष्ठम प्रश्नपत्र- आधुनिक गद्य (निबन्ध, नाटक एवं अन्य गद्य विधाएं)

विविध विधाओं के साहित्य का अध्ययन विद्यार्थियों में लेखन की अपार संभावनाएं उत्पन्न एवं विकसित करता है।

सप्तम प्रश्नपत्र- उपन्यास एवं कथा साहित्य

उपन्यास एवं कहानियाँ हमारे आम जन-जीवन से जुड़ी हुई घटनाओं पर आधारित होती हैं, जो हमें सामाजिक , धार्मिक , राजनैतिक एवं सांस्कृतिक जीवन-मूल्यों को समझने में सहायता प्रदान करती है।

अष्टम प्रश्नपत्र- पाश्चात्य काव्यशास्त्र

विभिन्न पाश्चात्य कवियों- प्लेटो , अरस्तू , लौंजाइनस , वड्र्सवर्थ , कॉलरिज , इलियट , रिचड्र्स आदि के सिद्धांतों का अध्ययन विद्यार्थी को पाश्चात्य लेखन शैली से परिचित करता है तथा पाश्चात्य आलोचनात्मक प्रवृत्तियों के आधार पर काव्य की समीक्षा करने में सहायता प्रदान करता है।

नवम प्रश्नपत्र- आधुनिक काव्य (भारतेन्दु युग से उत्तर छायावाद तक)

विभिन्न आधुनिक कवियों ने तत्कालीन परिवेश के आधार पर काव्य में विभिन्न तत्वों को समाहित किया, जिसका अध्ययन करके विद्यार्थी में नवीन एवं मौलिक काव्य-सृजन की क्षमता में वृद्धि होती है।

तृतीय सेमेस्टर

दशम प्रश्नपत्र- भाषा विज्ञान एवं हिन्दी भाषा

विद्यार्थियों को भाषा का व्याकरणिक ज्ञान- स्वन , वाक्य , रूपिम , अर्थ विज्ञान की विस्तृत जानकारी प्राप्त होती है ।

एकादश प्रश्नपत्र- आधुनिक काव्य (छायावादोत्तर हिन्दी कविता)

आधुनिक कवियों के काव्य में वर्तमान परिस्थितियों की झलक विद्यार्थी को वर्तमान यथार्थ से परिचित कराती है। कविता केवल काल्पनिक लोक ही नहीं , अपितु यथार्थ वस्तु जगत से भी बोध कराती है।

द्वादश प्रश्नपत्र- जयशंकर प्रसाद

छायावाद के चार स्तम्भों में से एक जयशंकर प्रसाद के सम्पूर्ण साहित्य का विस्तृत अध्ययन करके विद्यार्थी विशिष्ट साहित्यिक प्रतिभा को विकसित कर सकता है। प्रेम और सौन्दर्य के कवि जयशंकर प्रसाद के साहित्य में मानवीय संवेदना, प्रकृति-चित्रण , रहस्यवादी अनुभूति , कल्पना प्रवणता , भारतीय जीवन दर्शन की अभिव्यक्ति आदि विशेषताएं सर्वत्र दृष्टिगोचर होती हैं।

त्रयोदश प्रश्नपत्र- सूरदास

सूरदास के सम्पूर्ण साहित्य के विस्तृत अध्ययन में वात्सल्य और माधुर्य भावों से युक्त कृष्ण काव्य का चित्रण हृदय में स्वाभाविक आनंद की अभिव्यंजना करता है, साथ ही उनका काव्य एक साथ ही लोक और परलोक को प्रतिबिंबित करता है।

चतुर्थ सेमेस्टर

चतुर्दश प्रश्नपत्र- भाषा विज्ञान और हिन्दी भाषा

भाषा के उद्भव एवं विकास का व्याकरणिक स्तर पर विस्तृत अध्ययन करके विद्यार्थी में विषय विशेष की गहन समझ विकसित होती है।

पंचदश प्रश्नपत्र- प्रयोजनमूलक हिन्दी और मीडिया लेखन

हिन्दी केवल साहित्यिक भाषा न होकर राजभाषा (कामकाज़ी हिन्दी) भी है। विभिन्न प्रशासनिक कार्यों , वित्त , वाणिज्य , बैंकिंग , बीमा , व्यापार , विधि , विज्ञापन , संवाद लेखन , पटकथा लेखन , जनसंचार माध्यम, सरकारी पत्राचार , पारिभाषिक शब्दावली का निर्माण आदि विभिन्न कार्यों में इसका महत्वपूर्ण योगदान है।

षोडश प्रश्नपत्र- गढ़वाली लोक साहित्य

गढ़वाली लोक साहित्य, लोकगीतों, लोककथाओं, लोकगाथाओं के स्वरुप एवं विशेषताओं के ज्ञानार्जन के माध्यम से विद्यार्थी लोकभाषा, लोक संस्कृति, स्थानीय परम्पराओं और रीति-रिवाज़ों से परिचित होता है।

सप्तदश प्रश्नपत्र- जनपदीय भाषा साहित्य (गढ़वाली भाषा साहित्य)

क्षेत्र विशेष के साहित्य का ज्ञान साहित्य के विद्यार्थी को अवश्य होना चाहिए। विद्यार्थी में क्षेत्रीय भाषा के प्रति रूचि उत्पन्न होने से वह अपने क्षेत्र विशेष की साहित्यिक एवं सांस्कृतिक विरासत को समृद्धिशाली बनाने में सदैव प्रयासरत रहता है।

अष्टादश प्रश्नपत्र- मौखिकी

यह एक प्रकार की परीक्षा है , जिसमें बाह्य परीक्षक द्वारा विद्यार्थी से सम्पूर्ण पाठ्यक्रम में से प्रश्न पूछे जाते हैं और विद्यार्थी को मौखिक रूप से उन प्रश्नों का उत्तर देना होता है। इससे विद्यार्थी में अभिव्यक्ति की क्षमता का विकास होता है।

PROGRAM OUTCOMES, COURSE OUTCOMES

(FOR THE ACADEMIC YEAR 2021-22)

BACHLOR OF COMMERCE (BCOM)

Program Outcome	After the completion of the three year Bachelor of Commerce (B.Com) student will gain knowledge in the area of commerce, economics, finance, marketing, business, auditing, accounting and Entrepreneurship etc. After completing graduation decision making capacity of students will improve. Students will be able to prove their efficiency in competitive exams like CA, CS, ICWA and other courses and able to go for higher education and research in the field of Marketing and Finance. The placement options open up to them such as- cost accountant, teachers, stock agent, bank manager etc.

B Com I year

Course	Outcome	
Group- I	**Management Group**	
	Principal of Management	The student will be able to understand Principles & functions of Management, Process of decision making, and Modern trends in management process.
	Business Environment	This paper helps the students to understand the environment of enterprises, factors affecting business and fund raising in business.
Group- II	**Accounting Group**	
	Financial Accounting	Student will get conceptual knowledge of financial accounting and applying both Theoretical and practical knowledge to their future careers in business.
	Business Statistics	Student will develop the ability to analyse and interpret data to provide meaningful information aquire new skill on the applicationof statistical tools and techniques in business decision making.
	Business Economics and Legal Aspects of Business	
	Business Economics	The students will be able to understand the basic concepts of economics such as demand and supply, income and employment theories and analytical techniques which help in decision making.

Group- III	Business Law	Students will be able to understand the important business legislation that dictate how to form and run business along with relevant case law

B Com IInd Year

Group- I	**Management Group**	
	Personnel Management	Student will able to understand about procurement, development, compensation, integration, and maintenance of the personnel of an organization.
	Basic Business Finance	The students will be able to demonstrate the knowledge to manage the finance and financial requirements in business.
Group- II	**Accounting Group**	
	Cost Accounting	The student will be able to understand various aspects of cost ascertainment using various costing method and its determinants and advise the management to maximize its profits and used to streamline manufacturing operations.
	Corporate Accounting	The student will get knowledge of corporate accounting and to understand the various techniques of preparing accounting and financial statements of companies.
Group- III	**Business Economics and Legal Aspects of Business**	
	Money, Banking and Insurance	Student will be able to understand Indian banking system and their working and develop the practical knowledge and skill related to banking functions and also get the knowledge about Insurance.
	Legal Aspects of Business	Students acquire knowledge of Indian company act of 2013 and its amendments as well as statutory provisions of Industrial and Labour Laws.

B.COM Vth SEMESTER

COURSE	OUTCOME
Project Management	Student will get knowledge for formulating and handling the project.
Research Method	Students will learn relevant research skills and enable to demonstrate knowledge to their future careers in research.

Management of Financial Services	Through this paper the students learn about various financial institutions like Stock Exchange, Mutual Funds etc.
Goods and Service Tax (GST)	Student will be able to get basic knowledge of goods and service tax act and can also acquire practical skills to work as tax consultant, and other financial supporting services.
Management Accounting	The student acquires the knowledge in the Management Accounting Techniques in business decision making.
Working Capital Management	Student will learn Basic principles, tools and techniques of working capital management with a view to develop skill to take informed business decision

B.COM VIth SEMESTER

COURSE	OUTCOME
International Business	The students acquires the knowledge in different dimensions of international business.
Auditing and Corporate Governance	The student will be understand fundamental concepts of Auditing and corporate governanceand help to understand the right and wrong things in organization.
E-Commerce	Student will be able to understand e-commerce requirement of a business andsecurity over internet, payment systems and various online strategies for e business.
Seminar and Comprehensive	Student will be enhancing their presentation and communication skill also they learn to develop their personality, so that they can face the challenges of competitive world.
Income tax law and Practice	The students can understand the various provision of Income tax Act: 1961 relating to computation of Income of individual
OrganisationalBehaviour	The students will be able tounderstand the individual, group and organizational behaviour, leadership qualities, job satisfaction, Counseling and guidance and analyzing the attitude of the employees.

APB GOVERNMENT PG COLLEGE AGASTYAMUNI
DEPARTMENT OF Economics
PROGRAMME AND COURSE OUTCOME (2021-2022)
Undergraduate:

B.A. Ist year
Paper 1- Micro economics

Identify the determinants of supply and demand; demonstrate the impact of shifts in both market supply and demand curves on equilibrium price and output, define equilibrium, solve equations.

Paper 2- Structure and problems of Indian economy

Contemporary Issues in Indian Economy shall provide basic knowledge on national income accountings, various issues involved in agricultural, industrial, financial, trade sectors, public institutions and finally human resources development.

B.A. 2 nd year

Paper 1- Macroeconomic theory and public finance
Paper provides elementary theoretical foundation of key issues and policies. The course attempts to discuss the functional relationships between aggregates. It helps to understand the overall structure of the economy in theoretical and contemporary perspectives.

Paper 2- Money and banking and International Economics

Students successfully completing this unit will have the ability to understand the nature and scope of international economics, explain the Ricardo's theory of international trade and the different concepts of terms of trade and structure of BOP, disequilibrium in BOP, causes of disequilibrium and the foreign exchange rate and determine its equilibrium exchange rate.

B.a. 3rd year-

Paper -1 Basic Quantitative Methods for Economics
Students can learn about different quantitative methods and basic concept of data collection and sample collection and helps in tabulation of Data. It equips students with skills to make graphs.

Paper -Il Economics of Development and Planning .This course helps in studying economic planning and regional development. And various developmental issues like poverty,migration, women in rural ecomony.

Programme outcome

1. Critical Thinking: Helps in criticallly evaluating and anlysing government economic policies.

1. Being uptodate with current economic problems and the fiscal issues that nation is dealing with.
2. Knowledge of Economic System: An ability to understand economic theories and functioning of basic microeconomic and macroeconomic systems.
3. Acquiring Statistical and Mathematical Skills: Acquaint with collection, organization, tabulation and analysis of empirical data. Ability to use basic mathematical and statistical tools to solve real economic problems.

5. Development Perspectives: Delineate the developmental policies designed for developed and developing economics. The course also acquaint with the measurement of development with the help of theories along with the conceptual issues of poverty and inequalities.

M.A. Economics

Semester 1-
Paper1- Micro economics

On successful completion of the course, a student will be able to develop a sound understanding of the core microeconomic concepts that economists use to understand the process of decision-making by an economic agent(s).

Paper2- International economics
Students gain knowledge about various Concepts related to foreign exchange market and exchange rate and Various theories related to exchange rate determination, concepts related to balance of payments of a nation , Various approaches to the balance of payments of a nation Impacts of expansionary and contractionary fiscal policy and monetary on trade balance,

Paper3 - Quantitative methods and statistical techniques

Paper4- Uttrakhand economy
Students will learn about various issues of uttrakhand economy and challenges to it.

Semster2-
Paper 1- microeconomics 2
Students will learn about the concepts of microeconomics.

Paper2 - macro economics
Get an overview of the major developments in macroeconomic theory,with particular emphasis on the policy prescriptions of the earlier macroeconomic schools of thought.
Develop an understanding of the interrelationships among the various macroeconomic variables and the way they impact upon the working of the economy as a whole, thereby determining the course of the economy.

Paper3 - Economics of growth and development
It will enable them to understand the evolution of the measures of development.It will acquaint them with the latest theories of economic development.It will provide them with an understanding of how development is financed through domestically mobilized
resources.
Paper 4- Indian economic policy
This will help student learn about the indian economics and fiscal policies.

Semeter 3-
Paper1- Public Finance develops an understanding of various aspects public choice theory and Familiarity with the different aspects of fiscal federalism. Understanding of various aspects of fiscal policy and debt management

Paper2 - Monetary Economics
Hepls in **studying the conduct and effects of monetary policy, including its impact on interest rates and inflation, and the consequences of policy actions by central banks.**

Paper 3- Research Methodology
Helps in gaining statistical skilla and reseqrch skills.

Paper 4- Agricultural Economics
Understanding of the role of agriculture in economic development.Gathering knowledge about several celebrated models of agricultural development.

Semester 4-
Paper 1- Industrial Economics

Helps to understand issues such as the levels at which prices, capacity, and output are set, the variation factor between the commodities, the money to be invested in 'research and development' (R&D).

Paper 2- Economic Planning

Helps in **resource allocation mechanism based on a computational procedure for solving a constrained maximization problem with an iterative process for obtaining its solution**. Planning is a mechanism for the allocation of resources between and within organizations contrasted with the market mechanism.

Paper 3- Economics of human development

Studying economic aspect of human development. Helps in gaining knowledge aboit population ecpnomics and natural resources.

Paper 4- Demography

Helps in understanding the demography is an area of study that examines the determinants and consequences of demographic change, including fertility, mortality, marriage, divorce, location (urbanisation, migration, density), age, gender, ethnicity, population size and population growth.

PROGRAMME OUTCOME OF POST GRADUATE CLASSES.

1. It will develop in-depth knowledge of students in frontier areas of economic theory and methods, so that they are able to use the knowledge to study real world economic problems.
2. The course has a strong focus on theoretical and quantitative skills .The programme offers specialised optional courses, which allow student to pursue their studies in their area of interest.
3. Prepare students to develop critical thinking to carry out investigation about various socio-economic issues objectively while bridging the gap between theory and practice.
4. Prepare students for pursuing research or careers that provide employment through entrepreneurship and innovative methods. Because today's unemployment problem can also be solved by developing the micro and small entrepreneurship
5. Prepare students to develop own thinking /opinion regarding current national or international policies and issues
6. Create awareness to become a rational and an enlightened citizen so that they can take the responsibility to spread the governments' initiatives/schemes to the rural areas for the upliftment of the poor or vulnerable section of the society for inclusive growth.
7. Help in banking and insurance related exam, NET EXAM, Civil service s and other exam.