

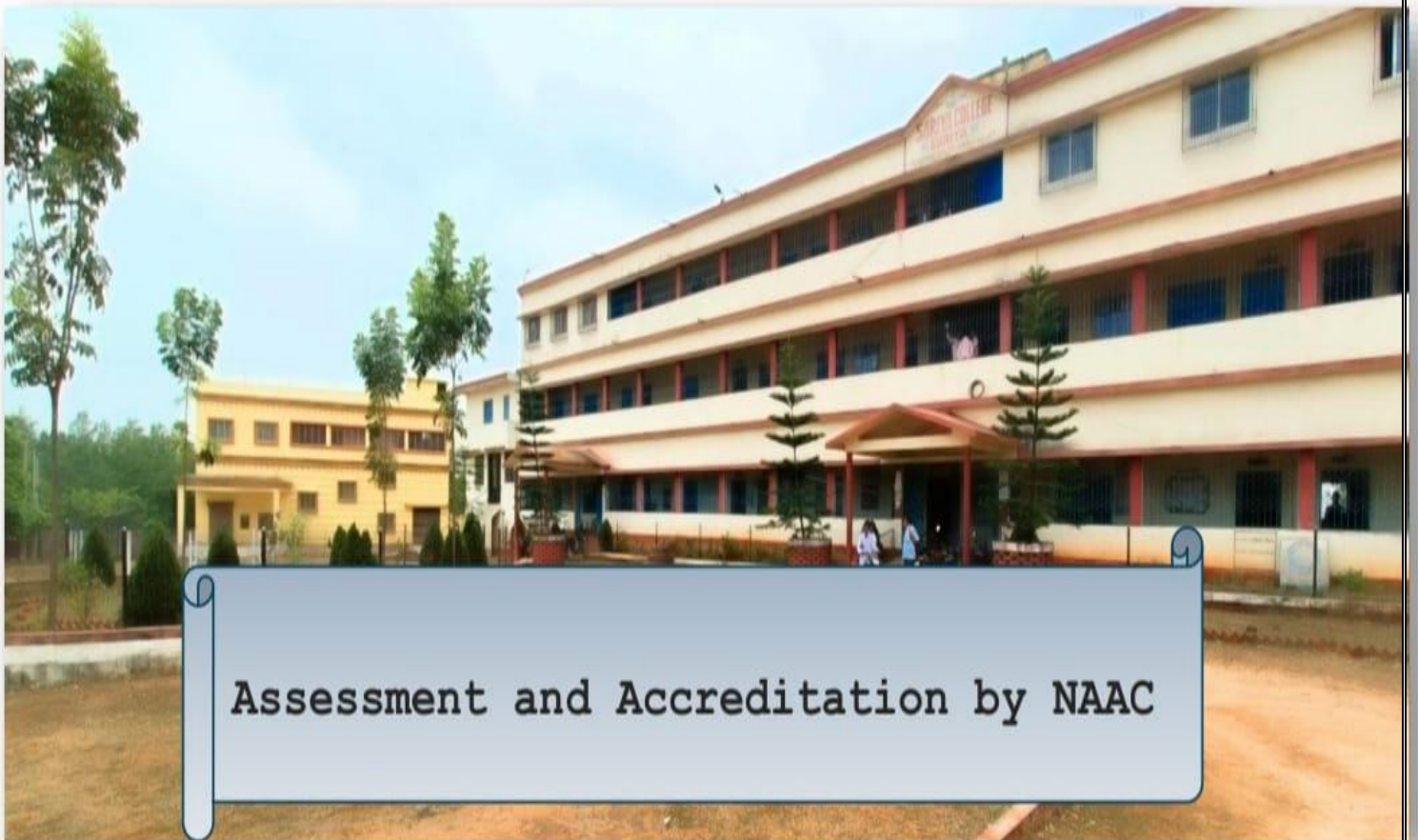


SARIYA COLLEGE, SURIYA

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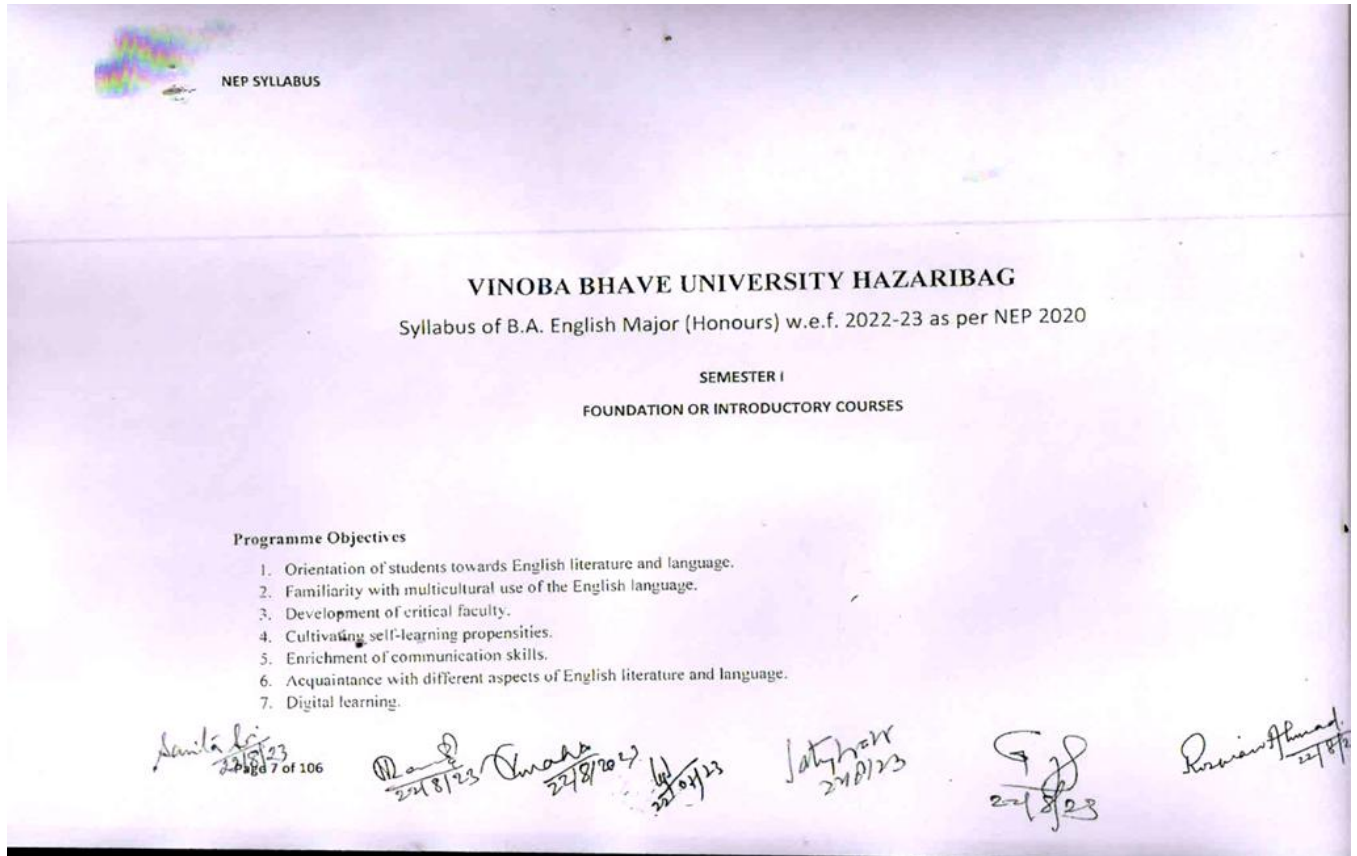
Po: Suriya, Dist: Giridih, Jharkhand, India, PIN - 825320, Accredited with Grade 'C' by NAAC CGPA 1.96
(Permanently affiliated to Vinoba Bhave University, Hazaribagh)

(Run under Sariya Mahavidyalya Shikshan Vikas Samiti, Society Registration Act 1860)



Assessment and Accreditation by NAAC

B.A. English Program Outcomes



B.A. Hindi Program Outcomes

पाठ्य-कार्यक्रम का अधिगम परिणाम –

स्नातक पाठ्यक्रम के विभिन्न सेमेस्टर्स के लिए एक ओर जहाँ हिंदी साहित्य के इतिहास का आदिकाल से लेकर आधुनिक काल तक के विभिन्न खंडों को रखा गया है, वहीं उस काल खंड के महान कवियों, लेखकों एवं उनके महत्वपूर्ण कृतियों को भी स्थान दिया गया है। लघु पाठ्यक्रम (MINOR DISCIPLINE) के अंतर्गत विषय संबंधी ज्ञान, आधुनिक भारतीय भाषा (अनिवार्य) हिंदी (MIL), अहिंदी (NON-HINDI) तथा संप्रेषण कौशल (COMMUNICATION SKILLS) के पाठ्यक्रम में भी हिंदी साहित्य की महान विभूतियों की विविध विधाओं की महत्वपूर्ण रचनाओं को रखा गया है। संप्रेषण कौशल से सम्बद्ध पाठ्यक्रम में

निबंध, भाषा, व्याकरण, पत्रकारिता के भी कुछ हिस्सों को अनिवार्य बनाया गया है। ये सब मिलकर स्नातक पाठ्यक्रम-साख रूप रेखा (CCFUP) के उद्देश्यों को पूर्ण करते हैं।

B.A. Philosophy Program Outcomes

AIMS OF FYUGP IN PHILOSOPHY

The aims of a FYUGP in Philosophy are to provide students with a comprehensive and foundational understanding of philosophical principles, methodologies, and theories. Through this course, students are exposed to a wide range of philosophical topics and develop critical thinking, analytical, and communication skills. The specific aims may vary depending on the course structure and the program's focus, but some common aims include: 1. Understanding Philosophical Concepts: Introduce students to the fundamental concepts and themes in philosophy, such as ethics, metaphysics, epistemology, logic, and political philosophy. 2. Developing Critical Thinking Skills: Foster the ability to think critically, analyse complex arguments, and identify logical fallacies in philosophical discourse. 3. Ethical Reasoning and Moral Awareness: Encourage students to engage in ethical reasoning and consider moral implications in various contexts. 4. Historical and Cultural Awareness: Provide insights into the historical development of philosophical thought, exploring the works of influential philosophers from different periods and cultures. 5. Interdisciplinary Connections: Highlight the interdisciplinary nature of philosophy and its connections to other academic fields, such as science, literature, politics, and the arts. 6. Problem-Solving and Decision-Making: Equip students with the capacity to apply philosophical methodologies to real-world issues and make informed and reasoned decisions. 7. Appreciating Diverse Perspectives: Encourage open-mindedness and respect for different philosophical viewpoints, promoting an inclusive and tolerant learning environment. 8. Preparation for Advanced Studies: Lay the groundwork for students interested in pursuing further studies in philosophy or related disciplines at the graduate level. 9. Engagement with Contemporary Issues: Enable students to apply philosophical concepts to contemporary social, political, and ethical challenges, encouraging active citizenship and critical engagement with societal issues. Overall, the Four Year Undergraduate Programme in Philosophy aims to instill a strong philosophical foundation that enables students to think critically, engage in philosophical inquiry, and apply philosophical perspectives to various aspects of life. The course aims to prepare students for a broad range of career paths, as well as for further academic pursuits in philosophy or related fields.

B.A. Sanskrit Program Outcomes

अध्ययन उद्देश्य(Objectives):

वेदाङ्ग के छः अंगों में व्याकरण एक है। एक महत्त्वपूर्ण भाषा के रूप में संस्कृत का अध्ययन-अध्यापन इस तरह से होना चाहिए कि इसमें विद्यार्थियों का प्रवेश सरलता से हो सके। इस उद्देश्य की पूर्ति के लिए सर्वप्रथम संस्कृत व्याकरण के उन उपादेय तत्वों को जानना जरूरी है, जिससे वे किसी भी संस्कृत रचना को भली भाँति समझने में सक्षम हो सकें।

अध्ययन अधिगम परिणाम(LOCF):

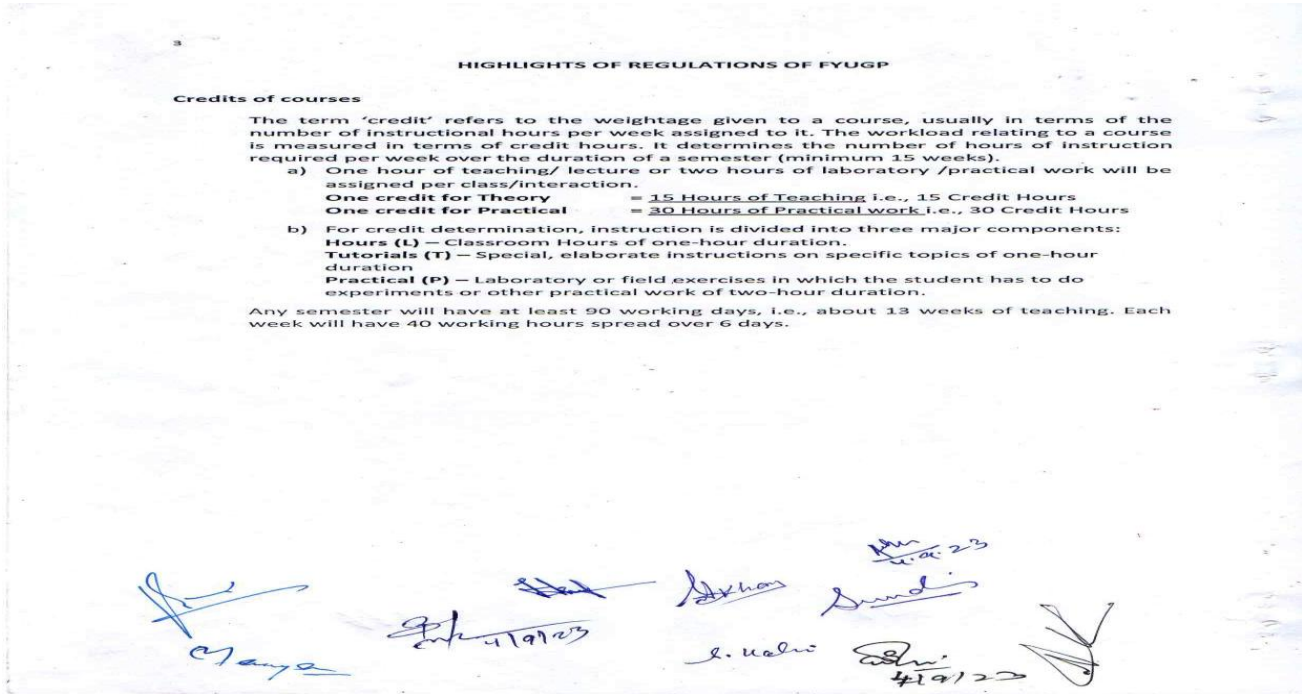
संस्कृत व्याकरण का अध्ययन सर्वथा छात्रोपयोगी है। कहा भी गया है कि

यद्यपि बहु नाधीषे तथापि पठ पुत्र व्याकरणम्।

स्वजनो श्वजनो माऽभूत्सकलं शकलं सकृत्सकृत् ॥

इस रूप में व्याकरण का अध्ययन न केवल संस्कृत भाषा को शुद्ध रूप में जानने-समझने में सहायक होगा, अपितु प्रकारान्तर से इसके समुचित पठन-पाठन से विद्यार्थीगणों में संस्कृत की विशाल ज्ञान-राशि में विद्यमान भारतीय संस्कृति के प्रति सम्मान की भावना विकसित हो सकेगी।

B.A. Urdu Program Outcomes



B.A. History Program Outcomes

Program Outcome

1. Demonstrate knowledge of the chronology, narrative, major events, personalities and turning points of the history of the India.
2. Provide multi-causal explanations of major historical developments based on a contextualized analysis of Modern World History.
3. Correctly extract evidence from primary sources on Naga History by analyzing and evaluating them in relation to their present cultural context and use that evidence to build and support an argument.
4. Evaluate secondary historical sources through the study of British Indian history by analyzing them in relation to the evidence that supports them, and other secondary historical literature.
5. Present orally their conclusion on an argument or a summary of scholars findings in an organized, coherent, and compelling manner.

B.A. Political Sc. Program Outcomes

Aim of Bachelor's Degree Programme in Political Science

The broad aims of the Bachelor's degree programme in Political Science are:

- (i) Broad and balanced knowledge in Political Science along with understanding key concepts, principles and theories of Political Science.
- (ii) To develop students' ability and skill to acquire expertise over comprehending and reasoning theoretical and applied aspects of Political Science.
- (iii) To provide knowledge and skill to the students' thus enabling them to undertake further studies in Political Science in specialized areas of the discipline as well as in multidisciplinary areas that can be helpful for self-employment/entrepreneurship.
- (iv) To provide an environment that ensures cognitive development of students in a holistic manner. A complete dialogue about Political Science and its significance is fostered in this framework, rather than a mere understanding of theories.
- (v) To provide the latest subject matter, both theoretical as well as practical, such a way to foster their core competency and discovery learning. A chemistry graduate as envisioned in this framework would be sufficiently competent in the field to undertake further discipline-specific studies, as well as to begin domain-related employment.
- (vi) To mould and a shape a responsible citizen who is aware of most basic domain-independent knowledge, including critical thinking and communication.
- (vii) To enable the graduate to prepare for national as well as international competitive examinations, especially UGC NET/SLET and UPSC/State PSC based examinations.

B.A. Geography Program Outcomes

After completing Four year undergraduate programme (FYUGP) as per provisions of NEP-2020 in Geography student will be able to -

Semester - I (Minor) I.R.C (Geography)

- the student will be able to understand Geography as a discipline and Bio-Physical and Socio-economic Processes of a Particular area on earth surface.
- To understand the physical aspects of earth surface.
- Student able to understand ~~the~~ human and economic aspects of Geography.

Semester - I (Major) - Theory

- After completion this course the student will be able to understand the theme of the geography and its development through time as well as changing man-environment relationship.
- students will be able to understand the conceptual framework of geography.
- To study the historical development and contributions in geography by different scholars.
- students will be able to understand modern trends in geography.

(Major) - Practical

- students will be able to learn the importance of map and its basic features.
- student will be able to learn various types of maps and its basic features.
- students will be able to learn indexing and interpretation of topographical sheet.

Semester - II (Theory) - Major

- After completion of this course the student will be able to understand the various components of earth system in different spheres and their inter-relationships. Various earth features in local, regional and global level.
- student's able to understand the components of the earth system - atmosphere, lithosphere and hydrosphere.
- student able to appreciate and understand various.
- student's able to appreciate and understand the relationship of the features of one sphere.

MAJOR - (PRACTICAL)

- student will be able to learn the importance of profile, geological cross-section, weather map, climograph and hythergraph.
- Students will be able to construction of profile geological cross-section and geological symbols.
- students will be able to interpretation of weather map, hythergraph, and climograph.

B.A. Sociology Program Outcomes

Aims of Bachelor's Degree Programme in Sociology

The broad aims of Bachelor's degree programme in Sociology are:

The aim of bachelor's degree programme in Sociology is intended to provide:

- (i) Broad and balance knowledge in Sociology in addition to understanding of key Sociology concepts, principles, and theories.
- (ii) To provide knowledge and skill to the student thus enabling them to undertake further studies in Sociology in related areas or multidisciplinary areas that can be helpful for self-employment/entrepreneurship.
- (iii) To provide an environment that ensures cognitive development of students in a holistic manner. A complete dialogue about Sociology, Sociology and its significance is fostered in this framework, rather than mere theoretical aspects.

The student graduating with the Degree B.A (Honors/Research) in Sociology should be able

B.A. Economics Program Outcomes

AIMS OF BACHELOR'S DEGREE PROGRAMME IN ECONOMICS THE BROAD

The broad aims of bachelor's degree programme in Economics are to provide:

- i) To mould a responsible citizen who is aware of most basic domain-independent knowledge, including critical thinking and common
- ii) To provide broad and balanced knowledge in economics in addition to understanding of key (concepts, principles, and theories of Economics.
- iii) To provide knowledge and skill to the students' thus enabling them to undertake further studies in economics and related areas or multidisciplinary areas that can be helpful for self-employment/entrepreneurship.
- iv) To develop students' ability and skill to acquire expertise over solving both theoretical and applied economic problems.
- v) To provide the latest subject matter, both theoretical as well as empirical in such a way to foster their core competency and discovery learning. A graduate in economics as envisioned in this framework would be sufficiently competent in the field to undertake further discipline-specific studies, as well as to begin domain-related employment.
- vi) To enable the graduate, prepare for national as well as international competitive examinations, especially UGC-CSIR NET and UPSC Civil Services Examination

B.Com. Accounts Program Outcomes

MAJOR COURSE MJ-01 : FINANCIAL ACCOUNTING

Objectives: The course aims to help learners to acquire conceptual knowledge on financial accounting, to impart skills for recording various kinds of business transactions and to prepare financial statements

Learning Outcomes: After completion of the course, learners will be able to:

1. Apply the generally accepted accounting principles while recording transactions and preparing financial statements;
2. Demonstrate accounting process under computerized accounting system;
3. Measure business income applying relevant Accounting Standards;
4. Evaluate the importance of depreciation and inventories in financial statements;
5. Prepare and manage cash book and other accounts necessary while running a business;
6. Prepare and maintain financial statements of sole proprietors and partnership firms;
7. Prepare accounts for Inland Branches and Not-for-Profit Organisations.

B.Sc. Physics Program Outcomes

Program Outcomes:

On successful completion of this course the student should know: → Revise the knowledge of calculus. These basic mathematical structures are essential in solving problems in various branches of Physics as well as in engineering.

a. Learn the curvilinear coordinates which have applications in problems with spherical and cylindrical symmetries. → Understand laws of motion and their application to various dynamical situations, notion of inertial frames and concept of Galilean invariance. He / she will learn the concept of conservation of energy, momentum, angular momentum and apply them to basic problems. → Understand the principles of elasticity through the study of Young Modulus and modulus of rigidity. → Understand simple principles of fluid flow and the equations governing fluid dynamics. → Describe special relativistic effects and their effects on the mass and energy of a moving object. → appreciate the nuances of Special Theory of Relativity (STR) → In the laboratory course, the student shall perform experiments related to mechanics (compound pendulum), rotational dynamics (Flywheel), elastic properties (Young Modulus and Modulus of Rigidity) and fluid dynamics (verification of Stokes law, Searle method) etc.

B.Sc. Botany Program Outcomes

Program Outcomes:

On successful completion of this course the student should know: 1. Students would understand the classification, characteristic features, cell structure and growth and reproduction in viruses, bacteria and economic importance. 2. Students would understand the general characteristics, morphology, life cycle under classification of algae proposed by Fritsch. Instruction to Question Setter for

B.Sc. Zoology Program Outcomes

After successfully completing this course, the students will be able to: ∞ Develop understanding on the diversity of life with reference to protists and non-chordates. ∞ Group animals on the basis of their morphological characteristics/ structures. ∞ Develop critical understanding how animals changed from a primitive cell to a collection of simple cells to form a complex body plan. Examine the diversity and evolutionary history of a taxon through the construction of a basic phylogenetic/ cladistics tree. ∞ Understand how morphological change due to change in environment helps driven evolution over a long period of time. ∞ The project assignment will also give them a flavour of research to find the process involved in studying biodiversity and taxonomy besides improving their writing skills. It will further enable the students to think and interpret individually due to different animal species chosen.

B.Sc. Mathematics Program Outcomes

This course will enable the students to:

- (i) Calculate the limit and examine the continuity of a function at a point.
- (ii) Understand the consequences of various mean value theorems for differentiable functions.
- (iii) Sketch curves in Cartesian and polar coordinate systems.
- (iv) Apply derivative tests in optimization problems appearing in social sciences, physical sciences, life sciences and a host of other disciplines.
- (v) Various integration techniques appearing in engineering and research.

Course Outcome

B.A. English Course Outcome

**SEMESTER I
PAPER I (MJ-1)**

Course Level Learning Outcome

1. An understanding of the socio-political-cultural aspects of the periods under study.
2. A comprehensive acquaintance with the development of English Language and Literature.
3. An acquaintance with the nature and different forms of English poetry during transitory phases from Middle English to Modern English.
4. Conversance with the form of English drama in its formative stage.

**SEMESTER II
PAPER II (MJ-2)**

Full Marks: 100 Credits: 06

BRITISH PROSE, POETRY AND DRAMA: 17TH AND 18TH CENTURY

Course Level Learning Outcome

1. Familiarity with the religio-literary interactions in the periods under consideration.
2. Understanding of the relationship between emotions and literary forms.
3. Awareness of the use of satire as literary motivation.
4. Acquiring an idea of the beginnings of English fiction proper.
5. Historical positing of English literature.

PAPER IV MJ-04

BRITISH PROSE (FICTION AND NON-FICTION): 18TH CENTURY (CREDIT-4)

Course Level Learning Outcome

1. Explain and analyse the rise of the critical mind
2. Examine and analyse the form and function of satire in the 18th century
3. Awareness of the use of satire as literary motivation.
4. Acquiring an idea of the beginnings of Neo-Classical fiction and non-fiction.
5. Acquaintance with the Neo-Classical fiction and non-fiction writers.

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SEMESTER III

PAPER IV MJ-04

BRITISH PROSE (FICTION AND NON-FICTION): 18TH CENTURY (CREDIT-4)

Course Level Learning Outcome

1. Explain and analyse the rise of the critical mind
2. Examine and analyse the form and function of satire in the 18th century
3. Awareness of the use of satire as literary motivation.
4. Acquiring an idea of the beginnings of Neo-Classical fiction and non-fiction.
5. Acquaintance with the Neo-Classical fiction and non-fiction writers.

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PAPER V MJ-05

BRITISH PROSE (FICTION AND NON-FICTION): 19TH CENTURY (CREDIT-4)

Course Level Learning Outcome

1. Identify and analyse the socio-economic-political contexts that inform the literature of the period
2. Comment on the historical and political awareness of literary texts as reflected in the transition from nature to culture in fiction and non-fiction
3. Understand the conflict between self and society in fiction and non-fiction of the period
4. Link the rise of the novel to the expansion of Colonialism and Capitalism
5. Understand the transition from Romantic to Victorian thought in literature and culture
6. Link the Victorian temper to political contexts in English colonies

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SEMESTER IV

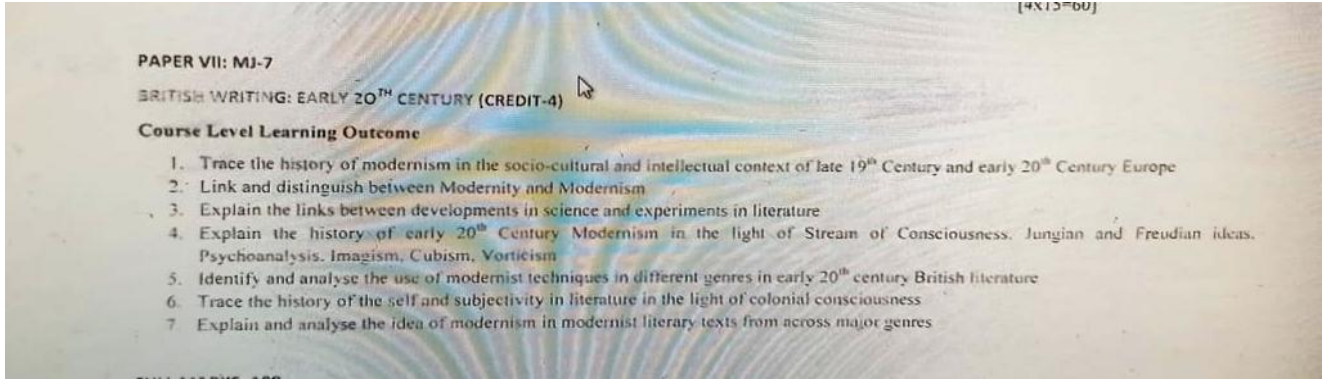
PAPER VI MJ-6

BRITISH POETRY: 19TH CENTURY (CREDIT-4)

Course Level Learning Outcome

1. Identify and analyse the socio-economic-political contexts that inform the literature of the period
2. Comment on the historical and political awareness of literary texts as reflected in the transition from nature to culture in Romantic and Victorian poetry
3. Understand the conflict between self and society in the poetry of the period
4. Understand the transition from Romantic to Victorian thought in literature and culture

FULL MARKS: 100



B.A. Hindi Course Outcome

पाठ्यक्रम के इस भाग का अधिगम (व्यावहारिक) परिणाम निम्नवत होगा –

- विद्यार्थियों में भावों और विचारों को अभिव्यक्त करने की क्षमता विकसित हो सकेगी ।
- व्याकरण की दृष्टि से वे सही वाक्य लिख सकेंगे ।
- विद्यार्थी लेखन कला सीख सकेंगे ।

पाठ्यक्रम के इस भाग का अधिगम (व्यावहारिक) परिणाम निम्नवत होगा –

- विद्यार्थी 11वीं शताब्दी से लेकर मध्यकाल के पूर्वार्द्ध तक के सामाजिक, सांस्कृतिक, राजनीतिक संदर्भों का ज्ञान प्राप्त कर सकेंगे ।
- हिंदी साहित्य के प्रारंभिक और विकासात्मक स्वरूप से परिचित हो सकेंगे ।
- हिंदी साहित्य के साहित्यकारों और उनकी रचनाओं के बारे में जान सकेंगे ।
- हिंदी के भावगत, भाषागत और शैलीगत विकास से परिचित हो सकेंगे ।

पाठ्यक्रम के इस भाग का अधिगम (व्यावहारिक) परिणाम निम्नवत होगा –

- विद्यार्थियों में संवाद –कला एवं वक्तृत्व–कला का विकास ।
- नाट्य मंचन के माध्यम से विद्यार्थियों में अभिनय–कला का विकास ।
- कथा–साहित्य व निबंध के माध्यम से विद्यार्थियों में रचनात्मक विकास और सृजन धर्म का विकास

पाठ्यक्रम के इस भाग का अधिगम (व्यावहारिक) परिणाम निम्नवत होगा –

- विद्यार्थियों को भारतवर्ष की 17वीं से 19वीं शताब्दी के मध्य के सामाजिक, सांस्कृतिक, राजनीतिक और आर्थिक परिदृश्य आदि का ज्ञान होगा ।
- इस काल के साहित्यकार और उनकी रचनाओं से वे परिचित हो सकेंगे ।
- इस काल के साहित्य का भावात्मक और राजसत्तात्मक प्रभाव का ज्ञान प्राप्त होगा ।

- इससे सृजन के काव्य रूप का ज्ञान प्राप्त होगा ।
- इससे साहित्य सृजन के आधार हिंदी भाषा और मौलिक स्वरूप का ज्ञान प्राप्त होगा ।

पाठ्यक्रम के इस भाग का अधिगम (व्यावहारिक) परिणाम निम्नवत होगा –

- इस पाठ के तीन खंड होंगे—भारतेंदु युगीन कविता, द्विवेदी युगीन कविता और छायावादी कविता—इस प्रकार 20वीं शताब्दी की शुरुआत के कुछ पूर्व से ही इस पाठ में विद्यार्थियों को कविता के स्वरूप का ज्ञान होगा। छायावादी कविता के काल तक आते-आते कविता की भाषा—शिल्प और संवेदना के क्रमिक विकास को विद्यार्थी जान सकेंगे ।
- भारतेंदु युग से छायावाद तक के काल की सामाजिक, आर्थिक, राजनीतिक एवं सांस्कृतिक स्थितियों एवं परिवेश से विद्यार्थी परिचित हो सकेंगे ।
- तत्कालीन राजनीति, सांस्कृतिक आंदोलनों एवं उनके साहित्यिक रूपांतरण के बारे में जान सकेंगे ।
- राष्ट्रीय नवजागरण के परिदृश्य से परिचित हो सकेंगे ।
- ब्रजभाषा से क्रमशः खड़ी बोली के कविता भाषा बनने और निखरने के इतिहास से परिचित हो सकेंगे ।
- छायावादी काव्य संवेदना और अभिव्यक्ति सौंदर्य से परिचित हो सकेंगे ।
- आख्यानों की आधुनिकता से अवगत होंगे ।

पाठ्यक्रम के इस भाग का अधिगम (व्यावहारिक) परिणाम निम्नवत होगा –

- उत्तर छायावाद युग की सामाजिक, सांस्कृतिक, आर्थिक एवं राजनीतिक परिस्थितियों एवं विसंगतियों से उपजे काव्यान्दोलनों से विद्यार्थी परिचित हो सकेंगे ।
- प्रगतिशील चेतना का वैचारिक आधार और अभिप्राय स्पष्ट रूप से जान सकेंगे ।
- इतिहास दृष्टि और लोकजीवन तथा प्रकृति से कविता के सरोकार को रेखांकित कर सकेंगे ।
- प्रयोगवादी काव्य की रचनात्मक प्राथमिकताओं, भावबोध और भाषा को समझ सकेंगे ।
- समकालीन कविता के युगबोध को वस्तुगत, सामाजिक—आर्थिक परिप्रेक्ष्य सहित समझ सकेंगे ।
- वैश्वीकरण और भूमंडलीकरण के परिप्रेक्ष्य और चुनौतियों को समझने का आधार मिलेगा ।
- पर्यावरण संबंधी रचनाओं से विद्यार्थी अवगत हो सकेंगे ।
- आख्यानों की आधुनिकता से विद्यार्थी परिचित हो सकेंगे ।

पाठ्यक्रम के इस भाग का अधिगम (व्यावहारिक) परिणाम निम्नवत होगा –

- कथा साहित्य के माध्यम से विद्यार्थी सम्पूर्ण मानव जगत की मानवीयता से परिचित होंगे ।
- कथा साहित्य विद्यार्थियों को जीवन की वास्तविकता से परिचित करायेगा ।
- कथा साहित्य के माध्यम से विद्यार्थियों में रचनात्मक विकास और सृजन धर्म का विकास होगा ।

- कथा साहित्य के विभिन्न संदर्भों और घटनाओं से विद्यार्थियों को जीवन में गतिशील रहने की प्रेरणा मिलेगी ।
- कथा साहित्य से विद्यार्थियों को गंभीर भावबोध को समझने का अवसर मिलेगा ।

पाठ्यक्रम के इस भाग का अधिगम (व्यावहारिक) परिणाम निम्नवत होगा –

- छायावादी काव्य संवेदना और अभिव्यक्ति सौंदर्य से परिचित हो सकेंगे ।
- उत्तर छायावाद युग की सामाजिक, सांस्कृतिक, आर्थिक एवं राजनीतिक परिस्थितियों एवं विसंगतियों से उपजे काव्यान्दोलनों से विद्यार्थी परिचित हो सकेंगे ।

B.A. History Course Outcome

Objective :

हड़प्पा सभ्यता से मौयय काल तक के पुरातात्विक एवं सातहतवयक स्रोतों के आधार पर सामातिक, रािनीततक, आर्थयक, धार्मयक एवं सांस्कृततक तस्थतत को िानना ।

Outcome:

हड़प्पा सभ्यता से मौयय काल तक के सामातिक, रािनीततक, आर्थयक, धार्मयक एवं सांस्कृततक तस्थततयों में आये पररितयनों को समझ पाएंगे ।

Objective :

कुषाणों, सातिहनों, गुप्तों, हषयिधयन, चालुक्यों एवं पल्लियों के रािनीततक प्रशासतनक एवं आर्थयक उपलतधधयों तथा सांस्कृततक योगदानों का अध्ययन करना ।

Outcome :

कुषाण काल से हषयिधयन काल तक की सामातिक, रािनीततक, आर्थयक एवं सांस्कृततक उपलतधधयों एवं इस काल में हुए सामातिक पररितयनों को िान पाएंगे ।

Objective

ददल्ली सलतनत एवं समकालीन क्षेत्रीय साम्राज्यों के शासक प्रशासन, धमय एवं संस्कृतत का अध्ययन करना ।

Outcome

यह िान पाएंगे दक ददल्ली सलतनत एवं क्षेत्रीय साम्राज्यों का दकन पररतस्थततयों में साम्राज्यादी ष्रितत, प्रशासन रािस्ि नीतत, धमय एवं संस्कृतत का तिकास हुआ ।

Objective

मुगलकालीन इततहास का समग्र अध्ययन करना ।

Outcome

मुगलकालीन सामातिक, आर्थयक, रािनीततक, प्रशासतनक, धार्मयक तथा कला एवं संस्कृतत का ितयमान उपादेयता िान पाएंगे ।

Objective

भारत में (1757-1857) के बीच ब्रिटिश शासन का उदय, विस्तार एवं विकास के कारणों तथा पररणामों का अध्ययन करना |

Outcome

ब्रिटिश शासन की प्रकृति, प्रशासनिक कार्यकलाप का उद्देश्य एवं भारत में हुए 18 वीं और 19 वीं शताब्दी के समाधि सुधार आन्दोलन के बारे में ज्ञान पाएंगे |

Objective

1857 के विद्रोह से लेकर 1950 ई० तक के संवैधानिक सुधारों की शिरीषकों को समझना और भारतीय संविधान विकासक्रम का अध्ययन करना |

Outcome

1858 का भारतीय शासन अधिनियम से लेकर 1947 ई० तक भारतीय स्वतंत्रता अधिनियम के दौरान आवश्यकता अनुसार अधिनियमों के स्वरूप को समझ पाएंगे |

Objective

अखिल भारतीय संगठन (कांग्रेस), राष्ट्रवाद, राजनीतिक विचारधाराओं को समझना |

Outcome

इसमें संगठनात्मक विकास में तितभन्न विचारधाराओं की भूमिका को समझ पाएंगे |

Objective

गाँधीवाद, समाजवाद और सामंती विचारधारा के साथ ही सांप्रदायिक राजनीतिक विकास और पररणाम स्वरूप देश का विभाजन का अध्ययन |

Outcome

तितभन्न विचारधाराओं को समझते हुए गाँधीवाद की प्रासंगिकता की जानकारी और सांप्रदायिकता एवं इसके पररणाम ज्ञान पाएंगे |

Objective

यूरोप में राजशाही शासन और प्राचीन शासन का पतन के साथ-साथ गणतंत्रिक सरकार की स्थापना का पतन अध्ययन करना |

Outcome

यूरोप में क्रान्तिके पररणाम स्वरूप संवैधानिक विधायक गठन तथा शाही, सामंती विशेषाधिकारों की कतमयों तथा यूरोपीय एकीकरण की जानकारी प्राप्त होगी |

Objective

प्रथम विश्वयुद्ध से तृतीय विश्वयुद्ध के बीच घटित घटनाओं के कारणों एवं प्रभावों का अध्ययन करना |

Outcome

विश्वयुद्ध के पररणामों एवं राष्ट्रसंघ के विश्वशांति की अधिारणा को ज्ञान सकेंगे |

Objective

औपतनितशक कालीन झारिंर् में रािनीततक, आर्थयक, धार्मयक पररितयन के साथ-साथ िनितीय आन्दोलनों का अध्ययन |

Outcome

झारिंर् में तिरिश शासन के दौरान िनिताततयों के ऊपर प्रभाि और िनितीय आन्दोलन का भारतीय राष्ट्रिाद में योगदान को िान सकेंगे |

Objective

तितभन्न अतधतनयम और आन्दोलन के तहत झारिंर् के एक अलग राज्य के रूप में स्थापना को िानना |

Outcome

झारिंर् के तनमायण में तितभन्न अतधतनयम आन्दोलनों िं संगठनों की भूतमका को िान पाएंगे |

Objective

अमेररकी क्रांतत के िलस्ि रूप अमेररकी प्रिांतत्र का उद्धि िं दास प्रथा के अंत को िानना |

Outcome

अमेररकी प्रिांतत्र की स्थापना में सहायक घिनाओं िं दास प्रथा के उन्मूलन के कारणों को िान सकेंगे |

Objective

प्रथम तिश्वयुद्ध िं तितीय तिश्वयुद्ध में अमेररका की भूतमका िं उसकी तिदेश नीतत को िानना |

Outcome

तिश्व शक्ति के रूप में अमेररका के उवथान को िान सकेंगे |

Objective

अ्ििम युद्ध से स्ितंत्रता प्राप्त होने तक चीन के तितभन्न पररिर्तयत तस्थततयों को िानना |

Outcome

चीन का औपतनितशक शक्तियों से स्ितंत्रता िं साम्ियादी सरकार की स्थापना का अिलोकन कर पाएंगे |

B.A. Political Sc. Course Outcome**Course Objective:**

The purpose of the course is to familiarize the students with the key elements of Indian Constitution and enable them to critically assess the working of government institutions in the broader framework of constitutionality and factors and forces which attempts to influence them.

Course Objective:

The course has been designed to introduce key concepts in politics to the students to sharpen their understanding of political discourses and the ability to make the scientific enquiry into the political phenomenon and political questions. Diverse traditions and approaches have ben included in the scheme of teaching to make understanding comprehensive and insightfu. Contemporary debates on

key concepts like equality, freedom, democracy, justice allow the students to understand the expanding horizons of discourses in the discipline.

COURSE OBJECTIVE:

The objective of this course is to introduce the students with the basics of ancient political thought of India. The students need to be acquainted with the vast repository of ideas and institutions produced by ancient Indian philosophers on politics and management of statecraft. The student would recall that India is one of the most ancient and rich civilizations of the world. This course module will make them understand the ideas of some prominent ancient political thinkers of India in light of the key sources like Vedas, Mahabharat, Ramayan, Puranas and some of the texts written by some individual philosophers themselves.

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COURSE OBJECTIVE:

The objective of this course is to introduce the students with the basics of grass roots democracy i.e. the panchayati raj system at the rural level and the urban self-government at the urban level.

Course Objective:

The course will enable the students to understand the functioning of governments and political systems in comparative perspectives. The political system does not operate in a vacuum. It has its own legal, economic, socio-political and cultural ambience in which it works. This course exposes the students to concepts and approaches which can apply to understand different political regimes in terms of the origin of governmental structures and their functioning. We have different political regimes even within the broader category of democratic regimes. However, they differ from each other in many respects. This course will allow the students to understand their functioning in a comparative perspective.

Course Objectives:

This paper focuses in detail on the political processes, role of ideology and the actual functioning of the political system in Jharkhand. The objective of the paper is to make students aware of the movement related with the formation of the state, political philosophy of Sadan community and tribal community and identifying various dependent and independent variables and their working at the state as well as local level. The paper further deals with the development model with tribal identity, tribal issues and working of coalition Government.

Course Objective:

The purpose of this module is to introduce to the students some modern political thinkers from the West who shaped the ideas and key concepts of political Science in the Anglo- American tradition.

Developing a 'just society' and a 'just state' has been a perennial question for all civilizations. But the answers are not alike. They are different across civilizations and times. This course examines the ideas of some of the prominent modern political thinkers beginning from Machiavelli to T. H. Green. The seeds of the conceptual themes which seem to be so enriched today with sovereignty, social contract, General will, Utilitarianism and theory of state. The course seeks to trace that ideas and tradition and examine them critically.

Course Objectives:

1. The objective of the paper is to familiarize the students with the Globalisation, its alternative perspective and contemporary global issues and challenges in the world community. The course debates key issues relating to the distribution of power, wealth and resources among nations as a result of the prevalent global economic structures. It also aims to develop an understanding of the emerging tension among states due to differing perceptions on key global issues and the changing global security architecture. It also deals with some prominent global politics related to ecological issues, NPT and CTBT, International Terrorism and issues related to Human Rights.

Course Objectives:

The aim of this course is to study the historical context, trace the origin, evolution and development of the differing political ideologies. Students shall gain knowledge about the role of different ideologies and their impact in politics. The course intends to trace the change and continuities in the doctrines of various ideologies and highlight its relevance in contemporary

Course Objectives:

This course will enable the students to understand the system and factors which influence the functioning of governments and political systems in comparative perspectives, especially the constitutions of Britain, U.S.A, France and Switzerland and China. This course exposes the students to systems of Federal and unitary form of government. It also contents the socio-economic bases of the constitutions of Britain, USA, France, Switzerland and China. We have different political regimes even within the broader category of democratic regimes, party systems, pressure group and public opinion etc. However, they differ from each other in many respects. This course will allow the students to understand the major influencing factors in functioning in a comparative perspective.

Course Objective:

The course provides thorough understanding of the public policy to the students. A sound public policy design, execution, monitoring and evaluation for the success of any public policy. Again, there is not a singular approach to the questions pertaining to these issues. This module exposes the students to the world of kind of literatures which represent different theories and approaches to these issues. It also explains how citizen's participation is so important for effective implementation of the public policy. Rules and Acts become redundant or ineffective implementation of the public policy. Rules and Acts become redundant or ineffective in the absence of active citizenry. This course enables the students to examine some of the key public policies initiatives in India.

Course Objective:

This Course focuses on the study of political parties in India both at center and state levels. The study comprises of their organization, ideology and political support base. The in-depth understanding of parties would enable the students also to examine the questions of inner party democracy, transfer of

power within the party and party manifesto. Further, it engages the students on the questions of government funding of elections and elections campaign in the country. With the application of new technologies and new mass media, it is important to understand how the nature and magnitude of elections campaigns have changed in India. The course allows the students to make a comparative study of elections manifestos of major political parties which will give them insight into their commitments to the issues and how and in what ways they converge as well as differ from each others.

Course Objectives:

The aim of this course is to enlighten the students about the Indian democracy and Indian federal system. It also includes the pros and cons of Parliamentary form of government and Presidential form of government. The course discusses the socio-economic determinants of Indian democracy with the role of women in Indian process. This course seeks to explain to the students the evolution and nature of federalism in India, centre-state relations and impact of regional parties on Indian federalism.

Course Objectives:

This course aims at a new interdisciplinary approach to understand and explain the comparative government and world politics as a political sociology. This approach highlights the relationship between political institutions and social institutions, political processes and social processes and political cultures and social cultures. Political sociology tends to impart a normative orientation unlike other courses which indicates its utmost salience in the syllabus. The course shall seek to make the theories and concepts relatable to the Indian context so that students can understand their relevance and applicability.

B.A. Sociology Course Outcome

A graduate student are expected to be capable of demonstrating comprehensive knowledge and understanding of both theoretical and experimental / applied knowledge of Sociology in various fields of interest like Sociology planning.

(vii) **Skilled communicator:** The course curriculum incorporates basic and advanced training in order to make a graduate student capable of expressing the subject through technical writing as well as through oral presentation.

(viii) **Critical Thinker and Problem Solver:** The course curriculum also includes components that can be helpful to graduate students to develop critical thinking ability by way of solving problems/numerical using basic knowledge of Sociology.

(ix) **Sense of Inquiry :** It is expected that the course curriculum will develop an inquisitive characteristic among the students through appropriate questions, planning and reporting experimental investigation.

(x) **Team Player:** The course curriculum has been designed to provide opportunity to act as team player by contributing in field – based

situation and industry.

(xi) **Skilled Project Manager:** The course curriculum has been designed in such a manner as to enable a graduate student to become a skilled project manager by acquiring knowledge about Sociology analysis.

(xii) **Digitally Literate :** The course curriculum has been so designed to impart a good working knowledge in understanding and carrying out data analysis, use of library search tools, and use of software and related computational work.

(xiii) **Ethical Awareness/Reasoning:** A graduate student requires to understand and develop ethical awareness/reasoning which the course curriculum adequately provides.

(xiv) **Lifelong learner:** The course curriculum is designed to inculcate a habit of learning continuously through use of advanced ICT technique and other available techniques/books/journals for personal academic growth as well as for increasing employability opportunity.

Course Outcome

Multi disciplinary Course (MDC) and of Sociology is to be studied by the students opting major subject other than Sociology.

a) Students opting Sociology as major subject will have to select other than Sociology as Multi disciplinary Course (MDC) and

Marketing Pattern of Each Paper:

a) **In** multi disciplinary Course (MDC) and **Major (MJ), Minor (MN) and Advanced Major (AMJ)** Total marks in a paper will be 100 (Internal Examination 25+ End Semester Examination 75)

Marks: 25 (5 Attendance & other + 20 SIE: 1.5 Hr) + 75 (ESE: 3 Hrs)
= 100 Pass Marks: 40

Instructions to Question Setters

The semester Internal Examination shall have two components. a) One semester Internal Assessment Written Test (SIA) of 20 marks b) Class Attendance Score (CAS) including the behavior of the student towards teachers and other students of the College of 5 marks. End Semester Examination (ESE 75 marks):

In the End Semester Examination there will be three groups of questions.

Group A Will contain very short answer type questions (Not MCQ) in which all are to be answered.

Group B (Question 2) will be short type, five questions of five marks each out of which any three questions to be answered.

Group C will contain descriptive type (Long answer type) five questions of fifteen marks each. Out of which any three questions to be answered.

Note : There may be subdivisions in each question of group B.

B.A. Economics Course Outcome

Course Outcome

The student graduating with the Degree B.A. (Honors/Research) in Economics should be able to: (i) Core Competency: Students will acquire core competency in the subject, and in allied subject areas. (ii) Systematic and coherent understanding of the fundamental concepts and all other related allied subjects of Economics (iii) Students will be able to use the evidence-based approach to explain the economic/socioeconomic problems. (iv) The students will be able to understand the characterization of materials. v) Students will be able to understand the basic principle of economics used for understanding the economic problems and may use them for planning. Students will be able to demonstrate the experimental techniques and methods of their area of specialization in Economics.

B.A. Geography Course Outcome

Course objective:

1. To understand the Conceptual framework of geomorphology and climatology.
2. To study the various concepts related to land surface and climate.
3. Understanding the recent climatic change phenomena

Course outcome:

After completion of this course the student will be able to understand the theme of the geomorphology and climatology including various theories, concepts and weather phenomena.

Course Objectives:

1. Learn the differences in terms of varied physical and demographic features of India
2. To study the economy and various types of resources in India.
3. To understand the major regions in whole.

Course outcome:

After the completion of the course the understanding of different aspect of India will be clear. This will include Physical, demographic, economy (industrial and agricultural), mineral wealth

Course objective:

1. To understand the Conceptual framework of geography.
2. To study the historical development and contributions of geography.
3. Understanding modern techniques in geography.

Course outcome:

After completion of this course the student will be able to understand the theme of the geography and its development through time as well as changing man-environment relationship.

Course objective:

1. To understand the Conceptual framework of Oceanography & Biogeography
2. To study the various aspects related to the same.
3. Understanding the importance of ocean and mother nature for human being.

Course outcome:

After completion of this course the student will be able to understand the theme of the oceanography & biogeography including various aspects, concepts and natural phenomena.

Course Objectives

1. To understand the Physical features and disaster risk management and mitigation in Jharkhand.
2. Analyse the mode of resource utilisation in Jharkhand
3. To study the conventional and non- conventional source of energy of Jharkhand.

Course outcome:

The student will gain information about Physical, economic, demographic attributes of Jharkhand state and will get to know about the mineral and energy wealth of Jharkhand

Course Objectives:

1. Know the changing human and cultural landscape at different levels.
2. Understand patterns and processes of population growth and its implications.
3. Appreciate the nature and quality of human landscapes.

Course outcome:

The student will be able to grasp the concept of human and cultural landscape, different approaches, different aspects of population including migration, agglomeration, urbanization.

Course Objectives:

1. To study the regional aspect of three northern continents and three southern continents
2. To study the various important geographical region of these continents

3. Appreciate the speciality of these regions.

Course outcome:

After the completion of the course the student will be able to gain knowledge about different characteristic features of three northern continents and three southern continents including physical, demographic, economic aspects etc.

Course Objectives:

1. To understand the evolution of settlement
2. To Analyse the various Settlement related theories

Course outcome:

The student will know about the different facets of settlement geography. Also know about development of settlement, important theories of settlement geography

Course Objectives:

1. To understand the regional approaches to development
2. To analyse the level of regional planning in reference to India
3. To assess the various region with respect to development and planning

Course outcome:

After the completion of course the student will gain knowledge about the varied aspects of regional development. The study will further carry towards the development and planning of regions in Indian context.

B.A. Philosophy Course Outcome

COURSE OBJECTIVE:

1. **Explore Key Philosophical Schools:** Examine major schools of Indian philosophy, including but not limited to *Nyāya*, *Vaiśeṣika*, *Sāṃkhya*, *Yoga*, *Mīmāṃsā*, *Vedānta*, and Buddhism. Delve into their unique perspectives on metaphysics, epistemology, ethics, and the nature of the self.
2. **Engage with Primary Texts:** Encounter selected excerpts from foundational texts of Indian philosophy, enabling students to engage directly with original philosophical writings.

COURSE LEARNING OUTCOMES:

By the completion of the course "Outlines of Indian Philosophy," students will be able to:

1. **Contextualize Philosophical Ideas:** Understand the historical, cultural, and social contexts in which various Indian philosophical traditions emerged, recognizing the influence of these factors on the development of philosophical thought.
2. **Evaluate Contemporary Relevance:** Assess the relevance of Indian philosophical concepts in addressing contemporary societal and ethical challenges, such as environmental ethics, social justice, and the pursuit of happiness.

3. Foster Cross-Cultural Understanding: Cultivate an open and respectful appreciation for cultural diversity, encouraging cross-cultural dialogue and the integration of Indian philosophical insights into broader global discourse.

COURSE OBJECTIVES:

The main objectives of such a course may include:

- 1. Philosophical theories:** Examining the major philosophical theories and ideas proposed by ancient Greek thinkers, such as metaphysics, epistemology, ethics, politics, and aesthetics.
- 2. Influence on Western thought:** Recognizing the significant influence of ancient Greek philosophy on the development of Western philosophical traditions and intellectual history.

COURSE LEARNING OUTCOMES:

Upon completing a course in Ancient Greek Philosophy, students should have achieved various learning outcomes that demonstrate their understanding of the subject matter. Some of the key learning outcomes may include:

- 1. Critical analysis:** Students should be able to critically analyse and evaluate philosophical arguments presented by ancient Greek thinkers, identifying logical fallacies, assessing the strength of their reasoning, and recognizing underlying assumptions.
- 2. Comparative analysis:** Students should be able to compare and contrast the ideas of different ancient Greek philosophers, highlighting similarities and differences between their philosophical systems.
- 3. Appreciation of diversity in thought:** Students should appreciate the diversity of philosophical perspectives within ancient Greek philosophy and recognize the value of intellectual diversity in shaping philosophical inquiry.

COURSE OBJECTIVE:

- 1. Metaphysical concepts and debates:** Examining the fundamental questions in Indian metaphysics, including the nature of reality, the self (*atman*), the ultimate reality (*Brahman*), the concept of causation (*karma*), and the relationship between the physical and spiritual realms.
- 2. Epistemological theories:** Exploring the various theories of knowledge (*pramana*) proposed in Indian philosophy, including perception, inference, testimony, comparison, and non-apprehension, and understanding how these differ from Western epistemological frameworks.

COURSE LEARNING OUTCOMES:

- 1. Philosophical implications:** Investigating the practical and ethical implications of metaphysical and epistemological concepts in Indian thought, including their influence on ethical theories, religious practices, and the quest for liberation (*moksha*).
- 2. Academic research and presentation:** Developing students' research skills in the context of Indian philosophy, including the ability to conduct scholarly research, present arguments effectively, and write academic papers on related topics.

The course seeks to provide students with a deeper appreciation of the rich philosophical heritage of India, foster critical thinking about fundamental questions concerning reality and knowledge, and facilitate cross-cultural philosophical exploration. By the end of the course, students should have a comprehensive understanding of Indian metaphysics and epistemology and its significance in the broader landscape of global philosophical thought

COURSE OBJECTIVE:

- 1. Key philosophical concepts:** Introducing students to fundamental philosophical concepts, such as metaphysics, epistemology, ethics, political philosophy, logic, and aesthetics.
- 2. Connections between periods:** Examining the interconnections between different historical periods and how earlier philosophical ideas influenced later philosophical developments.
- 3. Relevance to contemporary issues:** Exploring how the historical ideas and debates in Western philosophy continue to be relevant to contemporary ethical, political, and metaphysical discussions.

COURSE LEARNING OUTCOMES:

Upon completing a course in History of Western Philosophy, students should have achieved various learning outcomes that demonstrate their understanding of the subject matter and critical engagement with philosophical ideas. The learning outcomes may include:

- 1. Knowledge of philosophical history:** Students should possess a comprehensive knowledge of the major philosophical periods, movements, and thinkers that have contributed to the development of Western philosophy.
- 2. Synthesis of philosophical ideas:** Students should be capable of synthesizing and comparing philosophical ideas from different periods, recognizing connections, continuities, and changes in philosophical thought over time.

COURSE OBJECTIVE:

- 1. Ethical implications of religious and cultural practices:** Examining how Indian religious and cultural practices influence ethical beliefs and behavior, including the concepts of dharma in Hinduism and ahimsa in Jainism.
- 2. Moral reasoning and decision-making:** Developing students' ability to engage in moral reasoning and ethical decision-making using insights from Indian ethical tradition.

COURSE LEARNING OUTCOMES:

Upon completing a course in Indian Ethics, students should have achieved various learning outcomes that demonstrate their understanding of the subject matter and engagement with ethical theories and frameworks developed within Indian philosophical traditions. The learning outcomes may include:

- 1. Knowledge of Indian ethical traditions:** Students should possess a comprehensive knowledge of the major Indian philosophical schools that have contributed to the development of ethical theories in India.
- 2. Understanding of ethical concepts:** Students should be familiar with foundational ethical concepts in Indian thought, such as *dharma* (moral duty/righteousness), *karma* (action and its consequences), *ahimsa* (non-violence), *moksha* (liberation), and the pursuit of virtue.
- 3. Ethical engagement and personal growth:** Students should reflect on their own ethical values and beliefs, fostering personal growth and moral development.
- 4. Ethical awareness and sensitivity:** Students should develop a heightened awareness of ethical issues in various contexts and demonstrate sensitivity to the ethical dimensions of personal, social, and professional life.

COURSE OBJECTIVE:

1. Metaphysical concepts and debates: Examining fundamental metaphysical questions, such as the nature of reality, existence, causation, substance, time, space, and free will.

2. Epistemological theories: Exploring the nature and sources of knowledge, theories of truth, skepticism, and the limits of human understanding.

3. Comparison with other philosophical traditions: Contrasting Western metaphysical and epistemological ideas with those found in non-Western philosophical traditions, recognizing the diversity of philosophical inquiry.

COURSE LEARNING OUTCOMES:

Upon completing a course in Western Metaphysics and Epistemology, students should have achieved various learning outcomes that demonstrate their understanding of the subject matter and engagement with metaphysical and epistemological theories within the Western philosophical tradition. The learning outcomes may include:

1. Understanding of metaphysical concepts: Students should be familiar with fundamental metaphysical concepts, such as the nature of reality, existence, substance, causation, time, space, and the relationship between mind and body.

2. Epistemological theories and sources of knowledge: Students should understand the nature and sources of knowledge, theories of truth, and the epistemological challenges and limitations of human understanding.

3. Comparative perspectives: Students should be able to compare and contrast Western metaphysical and epistemological ideas with those from non-Western philosophical traditions, recognizing the diversity and universality of philosophical

COURSE LEARNING OUTCOMES:

Upon completing a semester course in Indian Logic, students should have achieved various learning outcomes that demonstrate their understanding of the subject matter and engagement with the foundational principles of traditional Indian logic systems. The learning outcomes may include:

1. Knowledge of Indian logical systems: Students should possess a comprehensive knowledge of the major Indian logical systems, such as *Nyāya* and *Vaiśeṣika*, their historical development, and their significance within Indian philosophical and intellectual traditions.

2. Understanding of logical concepts: Students should be familiar with fundamental logical concepts in Indian logic, such as *pramana* (sources of knowledge), *anumana* (inference), *upamana* (analogy), *shabda* (testimony), and *tarka* (reasoning), and their applications in different contexts.

3. Logical reasoning and problem-solving skills: Students should develop improved logical reasoning skills, including the ability to construct well-structured arguments and evaluate the validity of various logical claims.

COURSE OBJECTIVES:

1. Critical analysis of religious beliefs: Encouraging students to critically analyze the logical coherence, plausibility, and evidence for various religious claims, including theism, atheism, agnosticism, and religious pluralism.

2. Arguments for and against the existence of God: Analyzing classical and contemporary arguments for the existence of God, including cosmological, teleological, ontological, and moral arguments, as well as counterarguments from atheism and skepticism.

3. Understanding religious language: Investigating the nature of religious language, symbolism, and the challenges of describing the ineffable or transcendent in religious discourse.

COURSE LEARNING OUTCOMES:

1. **Knowledge of central philosophical concepts:** Students should possess a comprehensive knowledge of the fundamental concepts and questions explored in the field of philosophy of religion, such as the nature of God, religious experience, faith and reason, religious language, and the problem of evil.
2. **Evaluation of arguments for and against the existence of God:** Students should be capable of analysing classical and contemporary arguments for the existence of God, as well as counterarguments from atheism and scepticism, and understanding the strengths and weaknesses of these positions.
3. **Appreciation for religious diversity:** Students should recognize and appreciate the diversity of religious beliefs and practices across cultures and historical periods, fostering intercultural understanding and respect.

Overall, the learning outcomes of a course in Philosophy of Religion aim to equip students with a deeper understanding of the philosophical issues related to religion, critical thinking abilities, and an appreciation for the complexities and significance of religious beliefs in human experience and culture.

COURSE OBJECTIVES:

1. **Introduction to Social & Political Philosophy:** Familiarizing students with the central themes and questions explored in the field of social and political philosophy, such as justice, authority, rights, freedom, equality, and the nature of the state.
2. **Theories of power and authority:** Analysing different conceptions of power, authority, and the legitimacy of political rule, including discussions on civil disobedience and resistance to unjust regimes.
3. **Global justice and cosmopolitanism:** Examining philosophical perspectives on global issues, international relations, and the responsibilities of individuals and states in a globalized world.

COURSE LEARNING OUTCOMES:

1. **Understanding of central themes and questions:** Students should be familiar with the central themes and questions explored in social and political philosophy, such as justice, authority, rights, freedom, equality, and the nature of the state.
2. **Ethical citizenship and personal development:** Students should reflect on the ethical implications of social and political theories, fostering personal growth and considering their role as ethical citizens in society.

Overall, the learning outcomes of a course in Social & Political Philosophy aim to equip students with a deeper understanding of social and political theories, critical thinking abilities, and an appreciation for the complexities of social and political issues. Moreover, students should develop the ability to engage in thoughtful and respectful discussions about social and political matters from a philosophical standpoint.

COURSE OBJECTIVES:

1. **Introduction to Contemporary Western Philosophy:** Familiarizing students with the historical context and intellectual climate that gave rise to contemporary philosophical movements, such as analytic philosophy, existentialism, phenomenology, postmodernism, and critical theory.

2. **Examination of major philosophical movements:** Exploring the central themes and contributions of significant philosophical movements, such as logical positivism, linguistic philosophy, deconstruction, and hermeneutics.

3. **Contemporary relevance:** Applying contemporary philosophical theories to address and understand current societal, cultural, and ethical challenges.

COURSE LEARNING OUTCOMES:

Upon completing a course in Contemporary Western Philosophy, students should have achieved various learning outcomes that demonstrate their understanding of the subject matter and critical engagement with the philosophical ideas and movements that have shaped contemporary thought.

The learning outcomes may include:

1. **Knowledge of key philosophical figures:** Students should be familiar with the works of significant contemporary philosophers, such as Ludwig Wittgenstein, Jean-Paul Sartre, Martin Heidegger, Michel Foucault, Judith Butler, and others, and understand their contributions to philosophical thought.

2. **Reflective engagement:** Students should be capable of engaging in thoughtful and reflective discussions about contemporary philosophical ideas, fostering an appreciation for the complexities of philosophical inquiry.

3. **Intellectual openness and respect for diverse perspectives:** Students should have cultivated intellectual openness and a respect for diverse philosophical perspectives, recognizing the value of engaging with different philosophical traditions and

COURSE OBJECTIVES:

1. **Learning deductive reasoning:** Teaching students how to recognize and apply deductive reasoning patterns, including syllogisms, hypothetical syllogisms, and disjunctive syllogisms.

2. **Identifying logical fallacies:** Enabling students to identify common logical fallacies and errors in deductive arguments, and to critically evaluate the validity of an argument.

3. **Developing formal proofs:** Teaching students how to construct formal proofs using logical rules of inference, such as modus ponens, modus tollens, and the law of excluded middle.

4. **Using truth tables:** Introducing truth tables as a method to assess the validity of arguments and to determine the truth or falsehood of propositions in different logical situations.

5. **Analysing formal languages:** Familiarizing students with formal languages, including propositional logic and first-order predicate logic, and understanding their use in representing arguments.

COURSE LEARNING OUTCOMES:

Upon completing a course in Deductive Logic, students should have achieved various learning outcomes that demonstrate their understanding of the subject matter and proficiency in applying deductive reasoning and formal logic. The learning outcomes may include:

1. **Knowledge of logical concepts:** Students should possess a solid understanding of the basic concepts of deductive logic, including propositions, premises, conclusions, validity, soundness, logical connectives, and quantifiers.

2. **Proficiency in deductive reasoning:** Students should be able to recognize and apply deductive reasoning patterns, such as modus ponens, modus tollens, hypothetical syllogism, disjunctive syllogism, and others, to evaluate and construct deductive arguments.

3. **Identification of logical fallacies:** Students should be capable of identifying common logical fallacies and errors in deductive arguments, enhancing their ability to critically assess the validity of an argument.

COURSE OBJECTIVES:

- 1. Introduction to Symbolic Logic:** Familiarizing students with the basic concepts and principles of symbolic logic, including propositions, logical connectives, truth tables, and inference rules.
- 2. Propositional Logic:** Introducing students to propositional logic, where they learn how to represent complex statements using symbols and construct truth tables to evaluate the validity of logical expressions.
- 3. Predicate Logic:** Exploring predicate logic, which includes quantifiers and predicates, and allows students to reason about relationships between objects and properties.
- 4. Logical Proofs:** Teaching students how to construct formal proofs using deductive reasoning, rules of inference, and strategies such as direct proof, proof by contradiction, and proof by induction.

COURSE LEARNING OUTCOMES:

Upon completing a semester course in Symbolic Logic, students should have achieved various learning outcomes that demonstrate their understanding of the subject matter and proficiency in applying formal symbolic logic. The learning outcomes may include:

- 1. Propositional Logic Proficiency:** Students should be able to represent complex statements using symbolic notation and construct truth tables to evaluate the validity and logical relationships of propositions.
- 2. Predicate Logic Proficiency:** Students should demonstrate the ability to work with quantifiers and predicates to reason about relationships between objects and properties in predicate logic.
- 3. Recognizing Logical Fallacies:** Students should be capable of recognizing common logical fallacies and errors in reasoning, enhancing their ability to identify weak or flawed arguments.

COURSE OBJECTIVES:

- 1. Introduction to Contemporary Indian Philosophy:** Familiarizing students with the historical context and intellectual climate that gave rise to contemporary philosophical movements in India.
- 2. Engagement with Contemporary Debates:** Exploring the central themes and contributions of contemporary Indian philosophers in areas such as metaphysics, epistemology, ethics, philosophy of religion, and social and political philosophy.
- 3. Relevance in Modern Context:** Examining how contemporary Indian philosophical thought addresses contemporary societal, cultural, and ethical challenges.

B.A. Sanskrit Course Outcome**अध्ययन अधिगम परिणाम(LOCF):**

संस्कृत व्याकरण का अध्ययन सर्वथा छात्रोपयोगी है।

कहा भी गया है कि

यद्यपि बहु नाधीभे तथापि पठ पुत्र व्याकरणम्।

स्वजनो श्वजनो माऽमृतसकलं शकलं राक्त्वाकृत् ॥

इस रूप में व्याकरण का अध्ययन न केवल संस्कृत भाषा को शुद्ध रूप में जानने-समझने में सहायक होगा, अपितु प्रकारान्तर से इसके समुचित पठन-पाठन से विद्यार्थीगणों में संस्कृत की विशाल ज्ञान-राशि में विद्यमान भारतीय संस्कृति के प्रति सम्मान की भावना विकसित हो सकेगी।

अध्ययन अधिगम परिणाम(LOCF)-

दर्शन के पाठ्यक्रम का अनुशीलन करके छात्र समझ पाते हैं कि

- वट-बीजन्धाय की तरह संसार और कर्म की गति में अनादि संबंध है। ये दोनों स्वयं अनादि हैं।
- जीवन तथा दर्शन इन दोनों का चरम लक्ष्य एक ही है। उस परमसत्य की प्राप्ति के लिए 'दर्शन' सैद्धांतिक तथा 'जीवन' व्यावहारिक रूप है। दोनों में परस्पर एक घनिष्ठ संबंध है जिसके समझने से आनंद प्राप्त होता है।
- सभी दर्शन एक ही उद्देश्य से अर्थात् दुःख की चरम निवृत्ति या परमानंद की प्राप्ति के लिए ही प्रवृत्त होते हैं अतएव एक ही मार्ग के सभी पथिक हैं। दृष्टिकोण के भेद से परस्पर भेद होना स्वामापिक है, किंतु इनमें परस्पर वैमनस्य नहीं है।
- आत्मप्रबंधन हेतु गीता के पाठ्यांश समस्त मानसिक द्वंदों का निवारण करते हुए 'स्थितोऽस्मिन्मत्सन्देहः करिष्ये वचनं तव' सद्शरिथतप्राप्त होने का रास्ता प्रशस्त करते हैं।

अध्ययन अधिगम परिणाम (LOCF):

संस्कृत काव्यशास्त्र के अध्येता के रूप में चतुर्थ सत्र के विद्यार्थी किसी भी काव्य रचना के पीछे के प्रयोजन, काव्य निर्माण के उपादान हेतु, काव्य की शब्द-शक्तियों, काव्य में विद्यमान महत्वपूर्ण रसों, अलंकारों एवं छंदों (छन्दःपादौ तु वेदस्य) के विषय में मूलभूत जानकारी प्राप्त करते हैं।

... का चकत है।

अध्ययन अधिगम परिणाम(LOCF):

वैदिक शिक्षा के द्वारा विद्यार्थियों का चरित्र निर्माण, व्यक्तित्व का विकास, कार्यक्षमता में वृद्धि ही नहीं होती, भारतीय संस्कृति के संरक्षण के प्रति भी वे सचेत होते हैं। इनमें मात्र-छात्रों समृद्ध शिक्षा परंपराओं को आत्मसात करते हैं। जीवन में सक्षम होने के लिए वैदिक और सांस्कृतिक शिक्षा के महत्त्व को नकारा नहीं जा सकता है। वैदिक शिक्षा के सिद्धान्तों को शिक्षा में जोड़ कर कल्याणकारी राज्य की अवधारणा को भी साकार किया जा सकता है।

B.A. Urdu Course Outcome

The term 'credit' refers to the weightage given to a course, usually in terms of the number of instructional hours per week assigned to it. The workload relating to a course is measured in terms of credit hours. It determines the number of hours of instruction required per week over the duration of a semester (minimum 15 weeks).

- a) One hour of teaching/ lecture or two hours of laboratory /practical work will be

There will be **Only One Semester Internal Examination (SIE) in Major, Minor and Research Courses**, which will be organized at college/institution level. However, only one End Semester Examination (ESE) in other courses will be conducted either at College/ Institution or University level depending upon the nature of course in the curriculum.

B.Com. Commerce Course Outcome

Objectives: The course aims to help learners to acquire conceptual knowledge on financial accounting, to impart skills for recording various kinds of business transactions and to prepare financial statements

Course Outcomes: After completion of the course, learners will be able to:

1. Apply the generally accepted accounting principles while recording transactions and preparing financial statements;
2. Demonstrate accounting process under computerized accounting system;
3. Measure business income applying relevant Accounting Standards;
4. Evaluate the importance of depreciation and inventories in financial statements;
5. Prepare and manage cash book and other accounts necessary while running a business;
6. Prepare and maintain financial statements of sole proprietors and partnership firms;
7. Prepare accounts for Inland Branches and Not-for-Profit Organisations.

Course Outcomes:

After the completion of the course, the learners will be able to:

1. Examine various aspects of entering into a contract and implications of different types of contract;
2. Interpret the regulation governing the Contract of Sale of Goods;
3. Discuss the laws governing partnership and legal consequences of their transactions and other actions in relation with the partnership, and examine contractual obligations and provisions governing limited liability partnership;
4. Describe the significant provisions of the Competition Act to prevent practices having adverse effect on competition and provisions of the Consumer Protection Act to protect the interest of the consumers;
5. Explain the law governing regulation and management of foreign exchange under FEMA.

Course Outcomes: After completion of the course, learners will be able to:

1. Describe the rationale, merits, and demerits of issuing bonus shares for a company;
1. Prepare financial statements (Profit & Loss Account, Balance Sheet, etc.) using online software;
2. Prepare balance sheet after Internal Reconstruction of company;
3. Analyse the case study of major amalgamations of companies in India;
4. Describe the process of e-filing of annual reports of companies.

Course Outcomes:

After completion of the course, learners will be able to:

1. Examine and understand the various descriptive properties of statistical data.
2. Compare probability rules and concepts relating to discrete and continuous random variables to answer questions within a business context.

3. Analyse the underlying relationships between the variables to use simple regression models.
4. Analyse the trends and tendencies over a period through time series analysis.
5. Examine and apply index numbers to real life situations.

Course Outcomes:

After completion of the course, learners will be able to:

1. Explain relevant definitions and provisions relating to issue of prospectus and allotment of shares;
2. Synthesize company processes, meetings, and decisions;
3. Describe the framework of dividend distribution, Accounts of the company and Audit and Auditors of company;
4. Determine the role of Board of directors and their legal position;
5. State regulatory aspects involved in Oppression, Mismanagement, corporate restructuring and Winding Up and to study the composition of Adjudicating Authority i.e., NCLT and NCLAT and its

Course Outcomes: After completion of the course, learners will be able to:

1. Discern distinct entrepreneurial traits.
2. Identify the parameters to assess opportunities and constraints for new business ideas
3. Develop a business idea by adopting systematic process.
4. Design strategies for successful implementation of ideas.
5. Create a Business Plan.

Course Outcomes: After completion of the course, learners will be able to:

1. Use appropriate software for recording transactions and preparing accounts under Hire Purchase and Installment Purchase system;
2. Apply appropriate software to workout royalty accounts;
3. Prepare accounts relating to consignment business;
4. Provide services to departmental stores in preparing departmental accounts;
5. Guide business enterprises in preparing and submitting insurance claim statement against business losses;
6. Compare commercial accounting system with Government accounting system;
7. Explain Government financial administration

Course Outcomes: After completing the course, the learners will be able to:

1. Explain the evolution and factors influencing industrial relations in changing environment;
2. Evaluate the effectiveness of trade unions and factors influencing their growth.
3. Examine the effectiveness of workers' participation in management;
4. Evaluate the effectiveness of grievance redressal mechanism;
5. Analyse industrial disputes and implementation of its legal provisions;
6. Discuss the concept of bonus and wages payments for all the workers under Code on Wages,

Course Outcomes: After completion of the course, learners will be able to:

1. a. Explain the nature and scope of financial management;

- b. Assess the impact of time value of money in different business decisions;
2. Analyse capital budgeting process and apply capital budgeting techniques for business decisions;
3. Explain various capital structure theories and analyse factors affecting capital structure decisions;
4. Critically examine various theories of dividend, identify and analyse factors affecting dividend policy; and suggest sound dividend policy;
5. Design working capital policy based on the assessment of financial requirements;
6. Compare CSR and Profitability.

Course Outcomes: After completion of the course, learners will be able to:

1. Analyse and interpret the qualitative features of information provided in the Financial Statements of a company;
2. Analyse and interpret the contents of corporate annual report and auditor's report to understand the true and fair financial position of a company;
3. Compute and analyse accounting ratios of a company;
4. Conduct fund flow and working capital analysis;
5. Conduct cash flow analysis using cash flow reporting software.

Course Outcomes: After the completion of the course, the learners will be able to:

1. Develop necessary skills to prepare an HR policy to enable the employees attain work life balance;
2. a. Prepare a Human Resource Plan in an organisation;
- b. Prepare a report on job analysis; c. Organize an induction programme in an organisation;
3. Analyse the applicability and use of different kinds of training and development strategies in real life scenarios;
4. a. Organize counselling sessions for employees in an organisation;
- b. Design incentive schemes for different job roles in an organisation;
5. Create HR policies related to grievance redressal, employee health, safety, welfare, and their

Course Outcomes: After completion of the course, learners will be able to:

1. Determine various types of cost of production;
2. Compute unit cost and total cost of production and prepare cost statement;
3. Compute employee cost, employee productivity, and employee turnover;
4. Determine cost under job costing, batch costing, process costing, contract costing and service costing;
5. Apply activity-based costing for cost determination.

B.Sc. Mathematics Course Outcome

Course Objective & Learning Outcomes: This course will enable the students to:

- Learn and apply De Moivre's theorem.
- Understand relation and functions.
- Basic concept of theory of Numbers.
- Rank of matrix and solution of system of linear equations.
- Evaluation of Eigen values and Eigen vectors of a matrix.
- Introduction to vector space and linear transformations.

Course Objective & Learning Outcomes: This course will enable the students to:

- Understand many properties of the real line \mathbb{R} and learn to define sequence in terms of functions from \mathbb{R} to a subset of \mathbb{R} .
- Recognize bounded, convergent, divergent, Cauchy and monotonic sequences and to calculate their limit superior, limit inferior, and the limit of a bounded sequence.
- Apply the ratio, root, and alternating series and limit comparison tests for convergence and absolute convergence of an infinite series of real numbers.
- Learn some of the properties of continuous and uniformly continuous functions.

Course Objective & Learning Outcomes: The course will enable the students to:

- Understand the genesis of ordinary differential equations.
- Learn various techniques of getting exact solutions of solvable first order differential equations and linear differential equations of higher order.
- Know Picard's method of obtaining successive approximations of solutions of first order differential equations, passing through a given point in the plane and Power series method for higher order linear equations, especially in cases when there is no method available to solve such equations.
- Grasp the concept of a general solution of a linear differential equation of an arbitrary order and also learn a few methods to obtain the general solution of such equations.

Course Objective & Learning Outcomes: This course will enable the students to:

- Learn conceptual variations while advancing from one variable to several variables in calculus.
- Apply multivariable calculus in optimization problems.
- Inter-relationship amongst the line integral, double and triple integral formulations.
- Understanding importance of Green, Gauss and Stokes' theorems.

Course Objective & Learning Outcomes: The course will enable the students to:

- Recognize the mathematical objects called groups.
- Link the fundamental concepts of groups and symmetries of geometrical objects.
- Explain the significance of the notions of cosets, normal subgroups, and factor groups.
- Analyze consequences of Lagrange's theorem.

Course Objective & Learning Outcomes: This course will enable the students to:

- a) Apply a range of techniques to solve first and second order partial differential equations.
- b) Understand problems, methods and techniques of calculus of variations.

UNIT 1: First Order Partial D.E.

Course Objective & Learning Outcomes: This course will enable the students to:

- a) Obtain numerical solutions of algebraic and transcendental equations.
- b) Find numerical solutions of system of linear equations and check the accuracy of the solutions.
- c) Learn about various interpolating and extrapolating methods.
- d) Solve initial and boundary value problems in differential equations using numerical methods.
- e) Apply various numerical methods in real life problems.

Course Objective & Learning Outcomes: This course will enable the students to:

- a) Understand the basic concepts of rings and their properties.
- b) Recognize factorization and integral domain.
- c) Know the fundamental concepts in ring theory such as the concepts of ideals, quotient rings, integral domains, and fields.
- d) Learn in detail about polynomial rings, fundamental properties.

B.Sc. Botany Course Outcome

Course Objectives:

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

1. To gain knowledge of diversity, life forms, life cycles, morphology and importance of microorganisms.

Course Learning Outcomes:

On successful completion of this course the student should know:

1. Students would understand the classification, characteristic features, cell structure and growth and reproduction in viruses, bacteria and economic importance.
2. Students would understand the general characteristics, morphology, life cycle under classification of algae proposed by Fritsch.

Course Objectives:

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

1. To gain knowledge of diversity, life forms, life cycles, morphology of fungi, symbiotic associations and diseases of plants and their control.
2. To introduce students with general characters and life cycle of bryophytes and their usefulness to mankind.
3. To introduce the evolution of gametophyte and sporophyte in bryophytes.

Course Learning Outcomes:

On successful completion of this course the student should know:

1. Students would understand the classification of fungus given by Ainsworth, lichens as symbiotic associations.
2. Application of fungus in food industry.
3. Clear views of general symptoms of different plant diseases, stages involved in development of disease and their control measures.
4. To learn the organ formation in early land plants and information on the ecological and economic importance of bryophytes

Course Objectives:

On successful completion of this course the student should be able to:

1. To introduce students with general characters and life cycle of archegoniates and their usefulness to mankind.
2. To study palaeobotanical fossil plants and geological time scale.

Course Learning Outcomes:

On successful completion of this course the student should know:

1. To learn the organ formation in early land plants that resulted to diversity of species of “Pteridophytes” and “Gymnosperms”.
2. Information on the ecological and economic importance of pteridophytes and gymnosperms will help to understand their role in ecosystem functioning.
3. Knowledge of fossil plants formed in different era.

Course Objectives:

After completion of the course, the learner shall be able to understand:

1. To gain the knowledge of taxonomy and phylogeny of plants.

Course Learning Outcomes:

On successful completion of this course the student should know the:

1. Understanding of systematic, its importance in bioresource utilization and biodiversity management. Nomenclature pattern, Phylogeny, Classification systems of the plants.

Course Objectives:

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

1. Study of various tissue systems and their development and functions in plants.
2. To know anomalous behavior, plant adaptive and protective systems in plants.

Course Learning Outcomes:

On successful completion of this course the student shall know:

1. Knowledge of various cells and tissues, meristem, epidermal and vascular tissue system in plants.
2. Knowledge of basic structure and organization of plant parts in angiosperms.

Course Objectives:

After completion of the course, the learner shall be able to understand:

1. The course will provide insight to the organization of cell, its features and regulation at different levels.
2. Through the study of cell organelles, they will be able to understand the various metabolic processes such as respiration, photosynthesis etc. which are important for life.

Course Learning Outcomes:

On successful completion of this course the student should know:

1. This course will be able to demonstrate foundational knowledge in understanding of cell.
2. Understanding of Cell metabolism, chemical composition, physiochemical and functional

Course Objectives:

1. The paper will deal with heredity inheritance pattern among the organism.
2. Linkage and genetic recombination.
3. Gene mapping
4. Chromosomal structure.
5. Biometry

Course Learning Outcomes:

1. The unit will enable the students to learn about the use of linkage and recombination frequencies to map genes.
2. The unit will provide an understanding of:
 - Morphology of chromosomes and its relevance in genetics.
 - Chromosomal and their role in genome evolution with special reference to crop plants.
3. Awareness of data calculation and graphical representation.

Course Objectives:

After completion of the course, the learner shall be able to understand:

1. This course aims to introduce the students to the concepts and principles of ecology, biological diversity, conservation, sustainable development, population, community and ecosystem structure and function, application of these concepts to solve environmental problems. .

Course Learning Outcomes:

On successful completion of this course the student should know:

1. It will acquaint the students with complex interrelationship between organisms and environment; make them understand methods to studying vegetation, community patterns and processes, ecosystem functions, and principles of phytogeography.

B.Sc. Physics Course Outcome

Course Objective: *On completion of this course students will be able to understand-*

- Vector calculus and its application.
- Broad knowledge of vector differentiation , integration and differential equation as it is an important tool to understand advance physics.
- Remaining Topics included in this paper provide broad idea of the properties of matter.

Course Learning Outcomes:

On successful completion of this course the student should know:

- Revise the knowledge of calculus. These basic mathematical structures are essential in solving problems in various branches of Physics as well as in engineering. a. Learn the curvilinear coordinates which have applications in problems with spherical and cylindrical symmetries.
- Understand laws of motion and their application to various dynamical situations, notion of inertial frames and concept of Galilean invariance. He / she will learn the concept of conservation of energy, momentum, angular momentum and apply them to basic problems.
- Understand the principles of elasticity through the study of Young Modulus and modulus of rigidity.
- Understand simple principles of fluid flow and the equations governing fluid dynamics.
- Describe special relativistic effects and their effects on the mass and energy of a moving object.
- appreciate the nuances of Special Theory of Relativity (STR)
- In the laboratory course, the student shall perform experiments related to mechanics (compound pendulum), rotational dynamics (Flywheel), elastic properties (Young Modulus and Modulus of Rigidity) and fluid dynamics (verification of Stokes law, Searle method) etc.

Course Learning Outcomes:

After going through the course, the student should be able to

- Explain and differentiate the vector (electric fields, Coulomb's law) and scalar (electric potential, electric potential energy) formalisms of electrostatics.
- Apply Gauss's law of electrostatics to solve a variety of problems.
- Articulate knowledge of electric current, resistance and capacitance in terms of electric field and electric potential.
- Describe the magnetic field produced by magnetic dipoles and electric currents.
- Explain Faraday-Lenz and Maxwell laws to articulate the relationship between electric and magnetic fields.
- Understand the dielectric properties, magnetic properties of materials and the phenomena of electromagnetic induction.
- Describe how magnetism is produced and list examples where its effects are observed.
- Apply Kirchhoff's rules to analyze AC circuits consisting of parallel and/or series combinations of voltage sources and resistors and to describe the graphical relationship of resistance, capacitor and inductor.
- Apply various network theorems such as Superposition, Thevenin, Norton, Reciprocity, Maximum Power Transfer, etc. and their applications in electronics, electrical circuit analysis, and electrical machines.
- In the laboratory course the student will get an opportunity to verify various laws in electricity and magnetism such as Lenz's law, Faraday's law and learn about the construction, working of various measuring instruments.

- Should be able to verify of various circuit laws, network theorems elaborated above, using simple electric circuits.

Course Learning Outcomes:

This course will enable the student to

- Recognize and use a mathematical oscillator equation and wave equation, and derive these equations for certain systems.
- Apply basic knowledge of principles and theories about the behavior of light and the physical environment to conduct experiments.
- Understand the principle of superposition of waves, so thus describe the formation of standing waves.
- Explain several phenomena we can observe in everyday life that can be explained as wave phenomena.
- Use the principles of wave motion and superposition to explain the Physics of polarization, interference and diffraction.
- Understand the working of selected optical instruments like biprism, interferometer, and diffraction grating.
- In the laboratory course, student will gain hands-on experience of using various optical instruments and making finer measurements of wavelength of light using Newton Rings experiment, Fresnel Biprism etc. Resolving power of optical equipment can be learnt firsthand.

Course Learning Outcomes:

- Learn the Fourier analysis of periodic functions and their applications in physical problems such as vibrating strings etc.
- Learn about the special functions, such as the Hermite polynomial, the Legendre polynomial, the Laguerre polynomial and Bessel functions and their differential equations and their applications in various physical problems such as in quantum mechanics which they will learn in future courses in detail.
- Learn the beta, gamma and the error functions and their applications in doing integrations.
- Acquire knowledge of methods to solve partial differential equations with the examples of important partial differential equations in Physics.
- Learn about the Fourier transform, the inverse Fourier transform, their properties and their applications in physical problems. They are also expected to learn the Laplace transform, the inverse Laplace transforms, their properties and their applications in solving physical problems.

Course Learning Outcomes:

- Comprehend the basic concepts of thermodynamics, the first and the second law of thermodynamics, the concept of entropy and the associated theorems, the thermodynamic potentials and their physical interpretations.
- Learn about Maxwell's thermodynamic relations.
- Learn the basic aspects of kinetic theory of gases, Maxwell-Boltzman distribution law, equipartition of energies, mean free path of molecular collisions, viscosity, thermal conductivity, diffusion and Brownian motion.
- Learn about the real gas equations, Van der Waal equation of state, the Joule- Thompson effect.
- Learn to derive classical radiation laws of black body radiation. Wiens law, Rayleigh Jeans law, ultraviolet catastrophe. Saha ionization formula.

Course Learning Outcomes:

As the successful completion of the course the student is expected to be conversant with the following.

- Secure first-hand idea of different components including both active and passive components to gain a insight into circuits using discrete components and also to learn about integrated circuits.
- About analog systems and digital systems and their differences, fundamental logic gates, combinational as well as sequential and number systems.
- Synthesis of Boolean functions, simplification and construction of digital circuits by employing Boolean algebra.
- Sequential systems by choosing Flip-Flop as a building block- construct multivibrators, counters to provide a basic idea about memory including RAM, ROM and also about memory organization.
- In the laboratory he is expected to construct both combinational circuits and sequential circuits by employing NAND as building blocks and demonstrate Adders, Subtractors, Shift Registers, and multivibrators using 555 ICs. He is also expected to use μP 8085 to demonstrate the same simple programme using assembly language and execute the programme using a μP kit. At the end of the course the student is expected to assimilate the following and possesses basic knowledge of the following.
- N- and P- type semiconductors, mobility, drift velocity, fabrication of P-N junctions; forward and reverse biased junctions.
- Application of PN junction for different type of rectifiers and voltage regulators.
- NPN and PNP transistors and basic configurations namely common base, common emitter and common collector, and also about current and voltage gain.
- Biasing and equivalent circuits, coupled amplifiers and feedback in amplifiers and oscillators.
- Operational amplifiers and knowledge about different configurations namely inverting and non- inverting and applications of operational amplifiers in D to A and A to D conversions.
- To characterize various devices namely PN junction diodes, LEDs, Zener diode, solar cells, PNP and NPN transistors. Also construct amplifiers and oscillators using discrete components. Demonstrate inverting and non-inverting amplifiers using op-amps.

Course Learning Outcomes:

- Know main aspects of the inadequacies of classical mechanics and understand historical development of quantum mechanics and ability to discuss and interpret experiments that reveal the dual nature of matter.
- Understand the theory of quantum measurements, wave packets and uncertainty principle.
- Understand the central concepts of quantum mechanics: wave functions, momentum and energy operator, the Schrodinger equation, time dependent and time independent cases, probability density and the normalization techniques, skill development on problem solving e.g. one dimensional rigid box, tunneling through potential barrier, step potential, rectangular barrier.
- Understanding the properties of nuclei like density, size, binding energy, nuclear forces and structure of atomic nucleus, liquid drop model and nuclear shell model and mass formula.

- Ability to calculate the decay rates and lifetime of radioactive decays like alpha, beta, gamma decay. Neutrinos and its properties and role in theory of beta decay.
- Understand fission and fusion well as nuclear processes to produce nuclear energy in nuclear reactor and stellar energy in stars.
- Understand various interactions of electromagnetic radiation with matter. Electron positron pair creation.
- Understand the spontaneous and stimulated emission of radiation, optical pumping and population inversion. Three level and four level lasers. Ruby laser and He-Ne laser in details. Basic lasing.
- In the laboratory course, the students will get opportunity to perform the following experiments
 - Measurement of Planck's constant by more than one method.
 - Determine the absorption lines in the rotational spectrum of molecules.
 - Determine the wavelength of Laser sources by single and Double slit experiments
 - Determine the wavelength and angular spread of He-Ne Laser using plane diffraction grating.
 - Verification of the law of the Radioactive decay and determine the mean life time of a Radioactive Source, Study the absorption of the electrons from Beta decay. Study of the electron spectrum in Radioactive Beta decays of nuclei.
 - Plan and Execute 2-3 group projects in the field of Atomic, Molecular and Nuclear Physics in collaboration with other institutions, if, possible where advanced facilities are available.

Course Learning Outcomes:

This course will enable the student to get familiar with quantum mechanics formulation.

- After an exposition of inadequacies of classical mechanics in explaining microscopic phenomena, quantum theory formulation is introduced through Schrodinger equation.
- The interpretation of wave function of quantum particle and probabilistic nature of its location and subtler points of quantum phenomena are exposed to the student.
- Through understanding the behavior of quantum particle encountering a i) barrier, ii) potential, the student gets exposed to solving non-relativistic hydrogen atom, for its spectrum and eigenfunctions.
- Study of influence of electric and magnetic fields on atoms will help in understanding Stark effect and Zeeman Effect respectively.
- The experiments using Sci-lab will enable the student to appreciate nuances involved in the theory.
- This basic course will form a firm basis to understand quantum many body problems.
- In the laboratory course, with the exposure in computational programming in the computer lab, the student will be in a position to solve Schrodinger equation for ground state energy and wave functions of various simple quantum mechanical one- dimensional and three-dimensional potentials.

B.Sc. Zoology Course Outcome

Course Outcomes

After successfully completing this course, the students will be able to:

- ❖ Develop understanding on the diversity of life with reference to protists and non-chordates.
- ❖ Group animals on the basis of their morphological characteristics/ structures.
- ❖ Develop critical understanding how animals changed from a primitive cell to a collection of simple cells to form a complex body plan.
- ❖ Examine the diversity and evolutionary history of a taxon through the construction of a basic phylogenetic/ cladistics tree.
- ❖ Understand how morphological change due to change in environment helps driven evolution over a long period of time.
- ❖ The project assignment will also give them a flavour of research to find the process involved in studying biodiversity and taxonomy besides improving their writing skills. It will further enable the students to think and interpret individually due to different animal species chosen.

Course outcomes

After successfully completing this course, the students will be able to:

- ❖ Develop understanding on the diversity of life of chordate species.
- ❖ Group animals on the basis of their morphological characteristics/structures.
- ❖ Understand how morphological characteristics change due to change in environment helps driven evolution over a long period of time.
- ❖ The project assignment will also give them a flavour of research to find the process involved in studying biodiversity and taxonomy besides improving their writing skills. It will further enable the students to think and interpret individually due to different animal species chosen.

Course outcomes

After successfully completing this course, the students will be able to

- ❖ Understand the functioning of nucleus and extra nuclear organelles and understand the intricate cellular mechanisms involved.
- ❖ Acquire the detailed knowledge of different pathways related to cell signalling and apoptosis thus enabling them to understand the anomalies in cancer.
- ❖ Develop an understanding how cells work in healthy and diseased states and to give a 'health forecast' by analyzing the genetic database and cell information.
- ❖ Develop an understanding of concepts, mechanisms and evolutionary significance and relevance of molecular biology in the current scenario.
- ❖ Get well versed in recombinant DNA technology which holds application in biomedical & genomic science, agriculture, environment management, etc.
- ❖ Apply their knowledge in problem solving and future course of their career development in higher education and research.
- ❖ Get new avenues of joining research in related areas such as therapeutic strategies or related opportunities in industry.

Therefore, a fundamental understanding of Molecular Biology will help in career building in all these fields.

Course outcomes

After successfully completing this course, the students will be able to:

- ❖ Understand the physiology at cellular and system levels.
- ❖ Understand the mechanism and regulation of breathing, oxygen consumption and determination of respiratory quotient.
- ❖ Understand how mammalian body gets nutrition from different biomolecules.
- ❖ Understand the process of digestion and excretion.
- ❖ Understand the organization of nervous system and process of nerve impulse conduction.
- ❖ Understand the process of vision and hearing.
- ❖ Understand the process of muscle contraction.
- ❖ Learn the estimation of hemoglobin content, determination of blood groups and measurement of blood pressure.

Course outcomes

After successfully completing this course, the students will be able to:

- ❖ Understand about the importance and scope of biochemistry.
- ❖ Understand the structure and biological significance of carbohydrates, amino acids, proteins, lipids and nucleic acids.

- ❖ Understand the concept of enzyme, its mechanism of action and regulation.
- ❖ Understand the process of nucleotide biosynthesis .
- ❖ Learn the preparation of models of peptides and nucleotides.
- ❖ Learn biochemical tests for amino acids, carbohydrates, proteins and nucleic

acids.

- ❖ Learn measurement of enzyme activity and its kinetics.

Course outcomes

After successfully completing this course, the students will be able to:

- ❖ Understand how DNA encodes genetic information and the function of mRNA and

tRNA

- ❖ Apply the principles of Mendelian inheritance.
- ❖ Understand the cause and effect of alterations in chromosome number and

structure.

- ❖ Relate the conventional and molecular methods for gene manipulation in other

biological systems.

- ❖ Discuss and analyze the epigenetic modifications and imprinting and its role in

diseases.

- ❖ Get new avenues of joining research in related areas such as genetic engineering of

cells, cloning, genetic disorders, human fertility programme, genotoxicity, etc.

Course outcomes

After successfully completing this course, the students will be able to:

- ❖ Acquire an in-depth knowledge on the diversity and relationships in animal

world.

- ❖ Develop a holistic appreciation on the phylogeny and adaptations in animals.
- ❖ Enable the students to understand the evolution of universe and life.

- ❖ Understanding on the process and theories in evolutionary biology.
- ❖ Develop an interest in the debates and discussion taking place in the field of Evolutionary biology.

Course outcomes

After successfully completing this course, the students will be able to:

- ❖ Understand neurohormones and neurosecretions.
- ❖ Learn about hypothalamus and hypapophysial axis.
- ❖ Understand about different endocrine glands and their disorders.
- ❖ Understand the mechanism of hormone action.

Program outcome and course out come

Title :- Discussion on learning the Program outcome

Date :- 20.04.2023

Objectives :- 1) To understand the purpose of teaching a subject .

2) To understand the future prospect of studying a subject .

3) To understand the importance of preparing goal based class lecture.

Activity:- The discussion was organized by nodal officer of the cell Mr. K.P. Yadav. It was presided by resource person Dr. V. Sinha where she discussed about the importance of the cell, benefit of preparing goal based class lectures . She also discussed about making students understand the benefit of studying a subject.

Resource person :- Dr. V. Sinha ,(Pro. Incharge)

No of Participant :- 08

Outcomes :- The participants understood the benefit of making students aware about purpose of studying a subject.

The participants agreed to discuss the future prospect of studying a subject with the students

The participants agreed to prepare lesson plan in goal - based class lecture .



Title :- Discussion on course outcome

Date :- 20.05.2023

Objectives:-

- 1) To understand the difference between program outcome and course outcome.
- 2) To make teachers aware about university curriculum and syllabus.

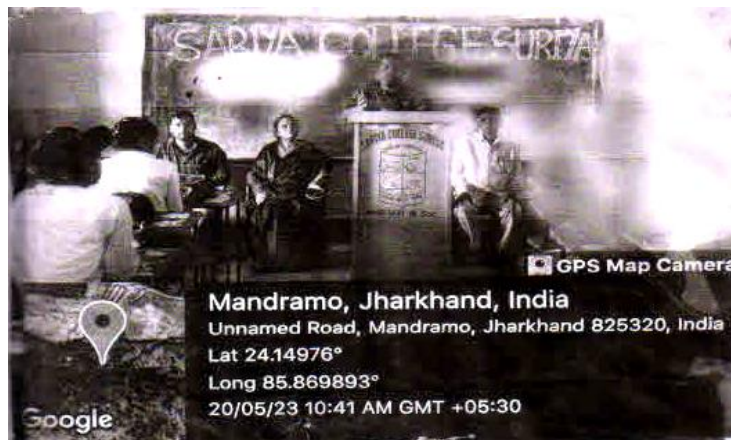
Activity:- The program was organized by the nodal officer Mr. K. P. Yadav. Dr. Vinita Sinha was invited as a resource person .She discussed about the significance of following the university curriculum while teaching. Other participants also added to the discussion.

Resource person :- Dr. Vinita Sinha , (Pro. Incharge)

No of participants :- 10

Outcomes :-

- 1) The participants understood the concept of program outcome and course outcome and difference between these two.
- 2) The participants agreed to adhere to the curriculum and syllabus provided by university.



Title :- Program Outcome Evaluation

Date :- 27.05.2023

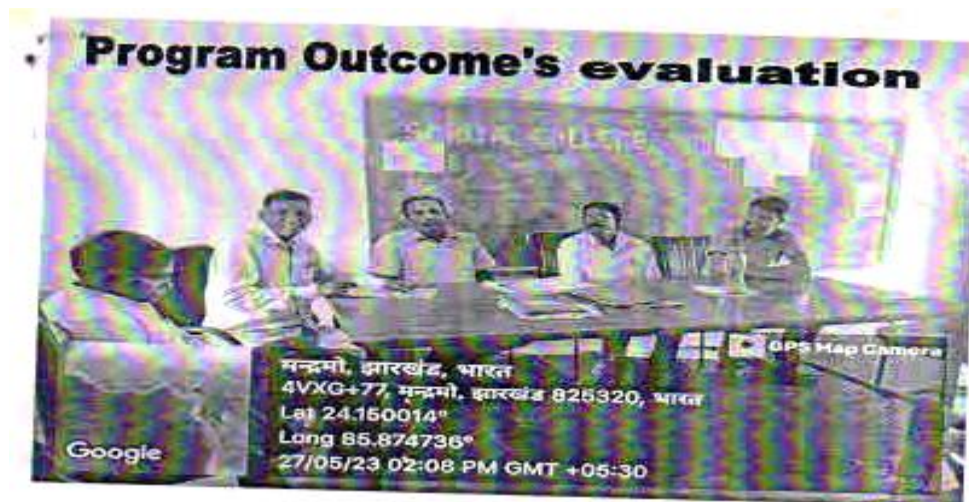
Objectives :- 1) To understand the significance of program outcome
2) To evaluate the performance of students of the college .

Activity :- The program was organized by the nodal officer Mr. K.P. Yadav and presided by the resource person Mr. R.K. Mishra. Mr. K.P. Yadav discussed about the concept of program outcome and it's relationship with students in future .Mr. R.K. Mishra shared the narratives of the students who have passed out from college and doing well in their lives.

Resource person:- Mr. R.K. Mishra , (Department of English)

No of participants : - 07

Outcomes :- 1) Participants understood the significance of program outcome.
2) Participants learned to evaluate the program through student's performance in their lives.



Title :- Evaluation of Program Outcome

Date :- 31.05.2023

Objectives :- 1) To evaluate the course outcomes through student's knowledge and their performance.

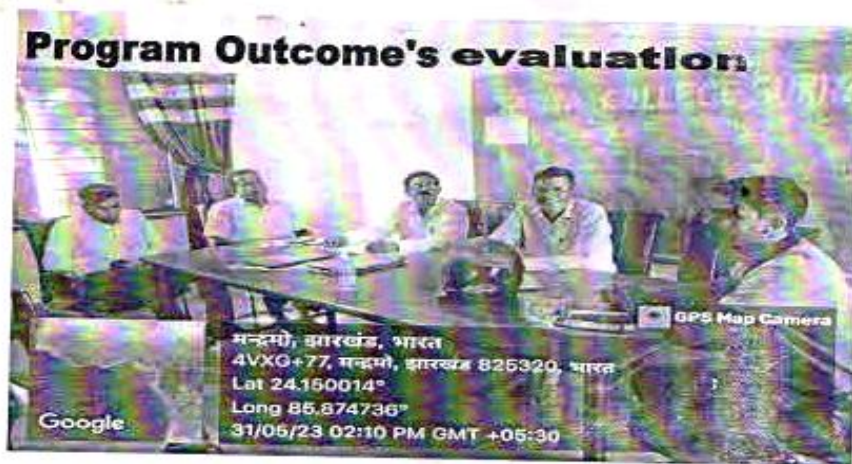
2) To evaluate each program offered by the college .

Activity :- This program was organised by the cell's nodal officer Mr. K .P. Yadav. He gave accounts of students from different streams and disciplines dealing with the challenges in their respective fields .

Resource person :- K.P. Yadav, (Nodal Officer)

No of participants :- 07

Outcomes :- The program offered by the college were evaluated by taking account of student's intellectual growth and performance in their respective field.



Title :- Discussion on evaluation of work

Date :- 22.06.2023

Objectives :- 1) To get acquainted with the methods to sharpen the skills of the students .
2) To evaluate the different evaluation process adopted by the college

Activity :- The meeting was called by Mr. K.P. Yadav, nodal officer .

Mr. R.K. Mishra addressed the meeting as the resource person .He elaborated on the methods used to test the learning and measure the intelligence level of the students. Besides he also discussed the ways to sharpen the skills of the students .Mr. Arun kumar from department of Economics gave the vote of thanks.

Resource person :- R.K Mishra ,HOD , English

No of participants :- 07

Outcomes :- 1) The need of skill sharpening of students was recognized.
2) Participants got acquainted with the summative evaluation Process.

3) They need to give extra attention to the students performing poorly were recognized .



K. P. Yadav

Santosh
PRINCIPAL
Surya College, Surya
Mukhin, Jharkhand