

Shrikrishna Mahavidyalaya, Gunjoti

Tq.Omerga, Dist.Osmanabad



Program Specific Outcomes, Program Outcomes and Course Outcomes of the programs run by the college of the curriculum implemented from the Academic Year 2013-14, Academic Year 2015-2016 and Academic Year 2021-2022

Programme	Programme Specific Outcomes	Course	Course Outcomes
B.A. English	PSO1: The students can understand English	Learning Language Skills	CO1: The students will be well acquainted with the grammatical properties CO2: They will be able to write and speak English fluently and consciously. CO3: The students will be well trained in precision and also in appropriate use of language through prose reading CO4: They will be well acquainted with a keen and subtle ways of using English language
	PSO2: They can read, Write and speak English.	The Structure of English (Paper No. I & III)	CO1 : The students will be able to develop their pronunciation CO2 : They will know the nuances of the written and spoken communication CO3: They will be able to acquire the structure of English.
	PSO3: The students will have linguistic and phonetic related knowledge.		CO1: The students will be well acquainted with various forms of literature CO2: They will be able to critically interact with others about different aspects of literature. CO3: The students will be able to differentiate between literary language and ordinary language. CO4: They can unravel many meanings in literary texts.
	PSO4: The Students will have the knowledge of literature and literary forms.	Reading Literature (Paper No. II & IV)	CO1: The students will be well developed in the skills of listening, speaking, reading and writing. CO2: The students will be well acquainted with the
PSO5: The students will talk English with well grammar and fluency.	Learning Language Skills II (Paper No. III & IV)		
PSO6: They can read and understand English prose.			

	<p>PSO7: The students will be well versed with Literary periods in English Literature.</p>		<p>grammatical properties English language CO3: They will be able to read, write and speak English fluently and consciously CO4: The students will acquire accuracy and will be trained in appropriate use of language through prose reading CO5: They will be well acquainted with a keen and subtle ways of using English language.</p>
	<p>PSO8: The Students will be able to understand literary language and ordinary language.</p>	<p>Literature in English 1550-1750 (Paper No. V & VII)</p>	<p>CO1 : The students will be able to read and appreciate various forms of literature CO2: They will be able to critically analyse different aspects of literature CO3: The students will be able to pinpoint the difference between literary language and ordinary language CO4: They can unfold many meanings in literary texts</p>
	<p>PSO9: The students will be able to understand modern English Literature.</p>		<p>CO1: The students will be able to read and appreciate various forms of literature CO2: They will be able to discuss and critically analyse different aspects of literature CO3: The students will be able to point out the difference between literary language and ordinary language CO4: They will be well trained to unfold many meanings in literary texts</p>
	<p>PSO10: The students will be able to understand various Literary Terms and Literary Criticism.</p>	<p>Literature in English 1750-1900 (Paper No. VI & VIII)</p>	<p>CO1: The students will be able to read and appreciate various forms of literature CO2: They will be able to discuss and critically analyse different aspects of literature CO3: The students will be able to point out the difference between literary language and ordinary language CO4: They will be well trained to unfold many meanings in literary texts</p>
	<p>PSO11: The Students will be able to understand Indian English and Indian Culture, traditions & Society.</p>	<p>Twentieth Century Literature (Paper No. IX & XIII)</p>	<p>CO1: The students will know and understand the literature of modern period. CO2: They will be able to critically interact with others about different aspects of literature CO3: The students will be able to differentiate between literary language and ordinary language. CO4: They can unravel many meanings in literary texts</p>
	<p>PSO12: The Students will be able to understand English Literature and Research Methodology.</p>	<p>Introduction to Literary Criticism and Terms (Paper No. X & XIV)</p>	<p>CO1: The students will understand literary terms, theories and literary devices CO2: The students will be well acquainted with various forms literary criticism CO3: They will be able to critically interact with others about different aspects of literature CO4: The students will be able to differentiate between literary language and ordinary language</p>

		<p>Indian Writing in English (Paper No. XI & XV)</p>	<p>CO1: They will be familiar with the Indian literature in English CO2: The students will come to know culture, tradition and ethics in society through Indian literature CO3: The students will be well acquainted with various forms of literature CO4: They will be able to critically interact with others about different aspects of literature CO5: The students will be able to differentiate between literary language and ordinary language.</p>
		<p>Project Work on History of English Literature (Paper No. XII & XVI)</p>	<p>CO1: The students will be well acquainted with the history of English literature and different authors. CO2: They will understand the aspects of research in literature CO3: They will develop analytical and critical thinking CO4: The students will develop writing skills by using appropriate research methodologies</p>

Programme	Programme Specific Outcomes	Course	Course Outcomes
B.A. Marathi	PSO१: मराठी भाषा, साहित्य व संस्कृतिची ओळख करून देणे	(SL) Paper- IIInd गद्य पद्य व उपयोजित मराठी	CO1: विद्यार्थी हे केंद्र बिंदू मानून भाषिक आकलन - आविष्करण समृद्ध करणे ... CO2: विद्यार्थ्यांचे वय / मानसिकता / क्षमता लक्षात घेऊन त्यांचा विकास घडवून आणण्याच्या दृष्टीने अध्ययन सामुग्री देणे. CO3: भाषिक कौशल्याचे ज्ञान देणे.
	PSO२: साहित्यातील नाट्यत्म अनुभवांचे विश्लेषण व आकलन शिकवणे.	(Opt) IIInd Paper नाट्यात्म साहित्य	CO1: मराठीतील विविध प्रवाह- प्रवृत्तींची ओळख करून देणे CO2: नाट्य म्हणजे संघर्ष — दृढ यातील ताणाबाणाचे स्वरूप लक्षात घेऊन साहित्याचे मूलबंध व आकृतिबंध लक्षात घेणे. CO3: वाडमयदृष्टी अधिक वृद्धिंगत करणे व विद्यार्थ्यांची सद्भिरुची वाढविणे.
	PSO३: मराठी भाषा, साहित्य व संस्कृतिची ओळख करून देणे.	Paper-IV गद्य पद्य व उपयोजित मराठी	CO1: मराठी साहित्यातील विविध प्रवाह आणि प्रकार लक्षात आणून देणे CO2: विविध प्रसार माध्यमांची ओळख करून देणे. CO3: माहिती तंत्रज्ञानाचा परिचय करून देणे.
	PSO४: ऐतिहासिक दृष्टीने साहित्य निर्मितीचा आढावा घेणे.	Paper-VII आधुनिक मराठी वाड्मयाचा इतिहास	CO1: इ.स १८०० ते इ.स. १९२० या कालखंडातील नाट्य वाड्मयाचे, वैशिष्ट्ये यांचा अभ्यास करणे. CO2: इ.स. १८०० ते इ.स १९२० या कालखंडातील वाड्मय निर्मितीची पार्श्वभूमी, तिच्या प्रेरणा व प्रवृत्तींचा अभ्यास करणे. CO3: विविध वाड्मय प्रकारातील ठळक ग्रंथकार व त्यांच्या वाड्मयकृतींचा स्थूल परिचय करून देणे.
	PSO५: समीक्षा संशोधनाची सुरुवात करणे.	Paper-XII प्रकल्प कार्य	CO1: वाचन लेखन कौशल्याचा विकास CO2: समीक्षणात्मक दृष्टीचा विकास. CO2: संशोधनात्मक दृष्टीचा विकास.
	PSO६: पाश्चिमात्य साहित्य विचारांचा परिचय करून देणे.	Paper-XIII पाश्चात्य साहित्यविचार	CO1: पाश्चिमात्य विचारवंतांनी साहित्याचा विचार निरनिराळ्या अंगांनी केलेला आहे. त्यांनी केलेल्या साहित्याच्या व्याख्या, साहित्याची प्रयोजने व साहित्य निर्मिती मागची कारणे यांचा अभ्यास करणे. CO2: साहित्यनिर्मिती व साहित्यानुभव या संबंधीच्या पाश्चात्य विचारवंतांच्या सिध्दांताचा, संकल्पनाचा परिचय करून देणे.
	PSO७: दृक-श्राव्य माध्यमांसाठी भाषिक उपयोजनांचे तंत्र अध्यापीत करणे.		
	PSO८: माध्यमांतरातील सुलभता शिकवणारी नेत्रे आत्मसात करावयास लावणे.		
PSO९: भारतीय परंपरेतील साहित्य विचाराची तोंड ओळख करून देणे.			

	PSO९: मध्ययुगीन मराठी वाङ्मयाचे विशेष प्रतिपादीत करणे.		CO3: साहित्य व इतर ललितकला यांच्यामधील परस्परसंबंधाची, त्यातील साम्यभेदाची ओळख करुन देणे.
	PSO१०: समिक्षा संशोधनाची सुरुवात करणे.	Ind Paper दृक श्राव्य माध्यमांसाठी लेखन कौशल्ये	CO1: दृक श्राव्य माध्यमांसाठी लेखन कौशल्याचा अभ्यास करणे CO2: इलेक्ट्रॉनिक मिडीयाने अवघे विश्वच पादाक्रांत केले आहे. संपूर्ण जगातील माहिती नभोवाणी, दूरचित्रवाहिन्या आणि संगणकाद्वारे आपल्या घरा-दारात पोहचत आहेत. त्या विषयीचा अभ्यास करणे. CO3: बातम्या, मुलाखती, रुपक, विविध मालिका, फॅशन शो, सिनेमा यांमुळे नवनवीन गोष्टीचे आकलन आभ्यासाद्वारे करणे.
	PSO११: व्याकरणाची मुलतत्वे शिकवणे व निबंध लेखनाचे कौशल्ये प्रतिबिंबित करणे.		CO1: साहित्य प्रकारांतराची संकल्पना स्पष्ट करणे. CO2: माध्यमांचे महत्व स्पष्ट करुन त्याचा साहित्याशी असणारा अनुबंध उलगडून दाखविणे. CO3: माध्यमांसाठीच्या लेखन प्रकारांचे महत्व व आवश्यकता याविषयी परिचय घडविणे.
	PSO१२: मध्ययुगीन मराठी साहित्याची व्याप्ती समजाऊन सांगणे.	Paper VIII साहित्य प्रकारांतर आणि साहित्याचे माध्यमांतर	CO1: साहित्यकृतीचा अनुभव घेण्याची, साहित्यकृतीला नेमका प्रतिसाद देण्याची क्षमता विकसित करणे. CO2: साहित्याचे स्वरूप, प्रयोजन- कार्य, साहित्यनिर्मिती व साहित्यानुभव या संबंधीच्या संस्कृत पाश्चात्य व मराठी सिध्दांताचा, संकल्पनाचा, वादांचा / प्रवृत्तींचा प्रवाहांचा विकित्सक परिचय करुन देणे. CO3: साहित्य व जीवन यांचा परस्पर संबंध स्पष्ट करताना या अभ्यासातून एकूणच जीवन मूल्यांचे व्यापक भान निर्माण करणे.
	PSO१३: मराठी भाषा, साहित्य, संस्कृतीची ओळख करुन देणे.	Paper XIII भारतीय साहित्यविचार	CO1: भाषाशास्त्रात भाषिक परिवर्तन हा महत्त्वाचा अभ्यास विषय आहे. क्ष्यामध्ये स्वप्नाचे स्वरूप, स्वनिम संकल्पना- रुपिम आणि पदविचार हा चिंतनाचा भाग असून त्याविषयी आधुनिक भाषाभ्यासकांची मते जाणून घेणे. CO2: प्रमाणभाषा व बोलीभाषा यातील फरक व संबंध समजून घेणे CO3: विविध कालखंडातील व एकाच कालखंडातील भाषेचे स्वरूप समजून घेणे
	PSO१४: ऐतिहासिक दृष्टीने साहित्य निर्मितीचा आढावा घेणे.		CO1: शिवकालीन सामाजिक, सांस्कृतिक, धार्मिक स्थिती-यती लक्षात घेत त्या काळात जी ग्रंथरचना झाली तिच्याबद्दल माहिती करुन घेणे. ग्रंथनिर्मिती मागील प्रेरणा व त्यांचा प्रत्यक्ष ग्रंथरचनेवरील परिणाम अभ्यासणे. CO2: पेशवेकालीन ग्रंथनिर्मितीमागील प्रेरणा व त्यांचा प्रत्यक्ष ग्रंथरचनेवरील परिणाम समजून घेणे
	PSO१५: मराठीतील वाङ्मय प्रवृत्ती बदलाचे अध्ययन करणे.	Paper X भाषाविज्ञान	
	PSO१६: मराठी भाषा संस्कृती, साहित्य यांची ओळख करुन देणे.	Paper XI मध्ययुगीन मराठी वाङ्मयाचा इतिहास	
PSO१७: कथेच्य 'काव्य' या मुख्याची व्याप्ती शिकवणे.			

	<p>PSO१८: कथेच्या 'कथन' या मुख्याची व्यापकता स्पष्ट करणे.</p> <p>PSO१९: मराठी भाषा, साहित्य, संस्कृतीची ओळख करून देणे.</p> <p>PSO२०: मराठी वाङ्मयाचा आधुनिकता या मुल्यांशी आलेला परिचय दाखवून देणे.</p>		<p>CO3: तत्कालीन महत्वाचे ग्रंथ, ग्रंथकार व ग्रंथविशेष यांचे आकलन करून घेणे.</p>
		Paper XVI प्रकल्प कार्य	<p>CO1: वाचन लेखन कौशल्याचा विकास</p> <p>CO2: समीक्षणात्मक दृष्टीचा विकास</p> <p>CO3: संशोधनात्मक दृष्टीचा विकास</p> <p>CO4: सिमा भागातील व आपल्या प्रादेशीक विशेषांचा भाषिक अभ्यास व संशोधन करणे.</p>
		Paper XIV व्याकरण व निबंध	<p>CO1: आपण जे बोलतो किंवा लिहितो ते नीटनेटके, व्यवस्थित, आकर्षक, शुद्ध ठेवण्याच्या दृष्टीने व्याकरणाचा अभ्यास करणे.</p> <p>CO2: वर्ण, शब्द, पद, वाक्य, भाषा, व्यवहारातील सुयोग्य उपयोग इत्यादींचा अभ्यास करणे.</p> <p>CO3: मराठी निबंध व लेखनविषयक नियमांचा अभ्यास करणे.</p>
		Paper- XV मध्ययुगीन मराठी वाङ्मयाच्या इतिहास	<p>CO1: यादवकालीन सामाजिक, सांस्कृतिक, धार्मिक स्थिती — गती लक्षात घेत त्या काळात जी ग्रंथरचना झाली तिच्याबद्दल माहिती करून घेणे, ग्रंथनिर्मितीमागील प्रेरणा व त्यांचा प्रत्यक्ष ग्रंथरचनेवरील परिणाम अभ्यासणे.</p> <p>CO2: बहामनीकाल ग्रंथनिर्मितीमागील प्रेरणा व त्यांचा प्रत्यक्ष ग्रंथरचनेवरील परिणाम व त्यांचा प्रत्यक्ष ग्रंथरचनेवरील परिणाम समजून घेणे.</p> <p>CO3: तत्कालीन महत्वाचे ग्रंथ, ग्रंथकार व ग्रंथविशेष यांचे आकलन करून घेणे.</p>
		(SL) Paper -III गद्य-पद्य उपयोजित मराठी	<p>CO1: पाठ आणि कवितेतील सामाजिक मूल्ये, लोकशाही मूल्ये, औद्योगिक अनुभव, साहित्यिक मूल्ये, सांस्कृतिक मूल्ये यांचे आकलन करून घेणे.</p> <p>CO2: साहित्यभ्यासातून जीवन जगण्याची कला विकसित करणे, समाजाकडे डोळसपणे पाहता येण्याची क्षमता विकसित करणे.</p> <p>CO3 : व्यवहार, विज्ञान, कार्यालयीन व वाङ्मयीन परिभाषेचे आकलन करता येणे.</p> <p>CO4 : मराठी साहित्यातील विविध प्रकार आणि प्रकार लक्षात आणून देणे, लेखक कवींचे व्यक्तिमत्व त्यांच्या साहित्यातील आशय अभिव्यक्तीचा परिचय करून देणे.</p>
		Paper -VII आधुनिक मराठी वाङ्मयाचा इतिहास (इ.स. १८०० ते इ.स. १९२०)	<p>CO1 : इ.स. १८०० ते १८७४ या कालखंडाची सामाजिक व सांस्कृतिक पार्श्वभूमी विचार प्रणाली, सामाजिक चळवळी यांचा वाङ्मयावरील प्रभावाचा अभ्यास करणे.</p> <p>CO2 : इ.स. १८०० ते १९२० या कालखंडातील वाङ्मय निर्मितीची पार्श्वभूमी, तिच्या प्रेरणा, प्रवृत्ती प्रवाह, महत्वाचे ग्रंथकार व त्यांच्या साहित्यकृती या अनुषंगाने अभ्यास करणे.</p>

			<p>CO3 : भाषांतरित वाङ्मय – नियतकालिके, निबंधमाला वैचारिक व ललित निबंध, कथा, कादंबरी, नाटक, काव्य, चरित्र आणि आत्मचरित्र या वाङ्मय प्रकारातील ठळक ग्रंथकार व त्यांच्या वाङ्मयकृतीचा स्थूल अभ्यास करणे.</p>
	गद्य-पद्य व उपयोजित मराठी	<p>Paper- I</p>	<p>CO1 : मराठीतील जुन्या नव्या कवी / लेखकांच्या कलाकृतींचा परिचय व्हावा म्हणून निवडक काव्य / कथा / अभ्यास करणे.</p> <p>CO2 : दैनंदिन भाषा वापर, साहित्यातील उपयोग, कार्यालयीन उपयोजनांचा विचार करणे.</p> <p>CO3 : वाङ्मयीन व भाषिक कौशल्याचे ज्ञान उपलब्ध करून देणारा अध्ययन क्रम सिद्ध करणे.</p>
	काव्यात्म साहित्य,	<p>Paper-I</p>	<p>CO1 : मराठी भाषेतील भाषेच्या वापराचा अर्थ, काव्यार्थ, सूचकता, तत्कालीन भाषिक शब्दकळा, मानवी मूल्य, सामाजिक संदर्भ सांस्कृतिकता याचा काव्य / गद्य अंशाच्या निमित्ताने परिचय घडविणे.</p> <p>CO2 : भाषेतील संवाद, उच्चार, लेखन, विस्तार शब्दसंग्रह यांचा परिचय</p> <p>CO3 : काव्यात्म, कथात्म आणि नाट्यात्मक असे विविध वाङ्मयाचे आविष्कार प्रकार त्यातील मानवी जीवनदर्शनाचे स्वरूप व विशेष लक्षात घेऊन वाङ्मय प्रकाराची जाण विकसित करणे.</p>
	कथात्म साहित्य	<p>Paper-I</p>	<p>CO1 : भाषेची सर्जनक्षमता विकसित व्हावी, सुप्त असणाऱ्या निर्मिती क्षमतेला चालना मिळावी व त्यातून कवी, कथाकार नाटककार निर्माण व्हावेत या अनुषंगाने विचार करणे.</p> <p>CO2 : कथन पातळीवरील वाङ्मय विशेष, काव्यात्मतेचे रुपरंग व नाट्य म्हणजे संघर्ष- दृढ यातील ताणाबाणाचे स्वरूप लक्षात घेताना साहित्याचे मूलबंध व आकृतिबंध लक्षात आणून देणे.</p> <p>CO3 : विद्यार्थ्यांत वाचन संस्कृती रुजविणे.</p> <p>CO4 : व्यावसायाभिमुख शिक्षणाची तयारी करणे.</p>
	गद्य पद्य उपयोजित मराठी		<p>CO1 : पाठ आणि कवितेतील सामाजिक मूल्ये, लोकशाही मूल्ये, औद्योगिक अनुभव, साहित्यिक मूल्ये, सांस्कृतिक मूल्ये यांचे आकलन करून घेणे.</p> <p>CO2 : साहित्यभ्यासातून जीवन जगण्याची कला विकसित करणे, समाजाकडे डोळसपणे पाहता येण्याची क्षमता विकसित करणे.</p> <p>CO3 : व्यवहार, विज्ञान, कार्यालयीन व वाङ्मयीन परिभाषेचे आकलन करता येणे.</p> <p>CO4 : मराठी साहित्यातील विविध प्रवाह आणि प्रकार लक्षात आणून देणे, लेखक कवींचे व्यक्तिमत्व त्यांच्या साहित्यातील आशय अभिव्यक्तीचा परिचय करून देणे.</p>

		<p>आधुनिक मराठी वाङ्मयाचा इतिहास (इ.स. १८०० ते इ.स. १९२०)</p>	<p>CO1 : इ.स. १८०० ते १८७४ या कालखंडाची सामाजिक व सांस्कृतिक पार्श्वभूमी विचार प्रणाली, सामाजिक चळवळी यांचा वाङ्मयावरील प्रभावाचा अभ्यास करणे.</p> <p>CO2 : इ.स. १८०० ते १९२० या कालखंडातील वाङ्मय निर्मितीची पार्श्वभूमी, तिच्या प्रेरणा, प्रवृत्ती प्रवाह, महत्वाचे ग्रंथकार व त्यांच्या साहित्यकृती या अनुषंगाने अभ्यास करणे.</p> <p>CO3 : भाषांतरीत वाङ्मय - नियतकालिके, निबंधमाला, वैचारिक व ललित निबंध, कथा, कादंबरी, नाटक, काव्य, चरित्र आणि आत्मचरित्र या वाङ्मय प्रकारातील ठळक ग्रंथकार व त्यांच्या वाङ्मयकृतीचा स्थूल अभ्यास करणे.</p>
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Programme	Programme Specific Outcomes	Course	Course Outcomes
B.A. Ist Year Hindi	PSO१: समाज मानवीय मूल्यों को विकसित कर संवेदनशील बनाता ।	SL सामान्य हिंदी - १	CO१: संवेदना का विकास । CO२: भाषा कौशल का विकास ।
	PSO२: साहित्य विविध विधाओंके माध्यमों से अभिरुची पैदा करते हुए जीवन मूल्यों की बढ़ोत्तरी करता है ।	SL सामान्य हिंदी - २	CO१: संवेदना का विकास । CO२: भाषा कौशल का विकास ।
		उपन्यास साहित्य -१	CO१: सामान्य आस्वादन और अभिरुचि का परिसंस्कार । CO२: जीवन मूल्यों के प्रति आस्था । CO३: उपन्यास साहित्य का अध्ययन । CO४: लेखन तथा भाषण कौशल का विकास ।
	PSO३: हिंदी भाषा का लेखन एवं भाषण कौशल विकसित करना ।	नाटक साहित्य-०२	CO१: हिंदी नाटक तथा रंगमंच का अध्ययन । CO२: संवेदना का विकास । CO३: नाट्यास्वादन तथा नाट्यालोचन क्षमता का विकास ।
	PSO४: प्रयोजनमूलक हिंदी के माध्यमों से रोजगार की संधियों से अवगत करना ।	हिंदी गद्य साहित्य- ०३	CO१: कहानी तथा व्यंग का अध्ययन । CO२: संवेदना का विकास । CO३: साहित्य आस्वादन तथा मूल्यांकन क्षमता का विकास ।
	B.A. IInd Year	PSO५: साहित्यशास्त्र की लक्षण एवं स्वरूप से अकात करना ।	एकांकी साहित्य ०४
PSO६: प्रादेशिक भाषा साहित्य (मराठी) की श्रेष्ठ साहित्य कृतियों का हिंदी भाषा छात्रों को अवगत करना ।		SL सामान्य हिंदी - ०३	CO१: साहित्य आस्वादन अभिरुची का परिसंस्कार । CO२: जीवन मूल्यों के प्रति आस्था । CO३: आत्याधुनिक इलेक्ट्रानिक माध्यमों का परिचय ।

B.A. IIIrd Year	PSO७: वंचित वर्गों को जीवन दशा से अकात किया है।	SL सामान्य हिंदी - ०४	<p>CO१: साहित्य आस्वादन अभिरुची का परिसंस्कार।</p> <p>CO२: जीवन मूल्यों के प्रति आस्था।</p> <p>CO३: भाषा प्राद्योगिकी - विज्ञापन कला व ज्ञान।</p> <p>CO४: आत्याधुनिक इलेक्ट्रानिक माध्यमों का परिचय।</p>
		कथेत्तर गद्य साहित्य-५	<p>CO१: साहित्य आस्वादन अभिरुच में वृद्धि।</p> <p>CO२: जीवन मूल्यों के प्रति आस्था।</p> <p>CO३: हिन्दी कथेत्तर गद्य संवेदना की परम्परा का परिचय।</p>
		प्रयोजनमूलक हिन्दी- ६	<p>CO१: हिन्दी भाषा के विविध रूपों के परिचय।</p> <p>CO२: राजभाषा हिन्दी के विभन्न पहलुओं का परिचय।</p> <p>CO३: प्रयोजनमूलक भाषा तथा अनुवाद की भूमिका का परिचय।</p>
		आधुनिक हिन्दी कविता - ७	<p>CO१: साहित्य आस्वादन अभिरुची का परिचय।</p> <p>CO२: जीवन मूल्यों के प्रति आस्था।</p> <p>CO३: हिन्दी पद्य संवेदना की परम्परा से परिचय।</p>
		प्रयोजनमूलक हिन्दी-०८	<p>CO१: हिन्दी भाषा के विविध रूपों के परिचय।</p> <p>CO२: राजभाषा हिन्दी के विभन्न पहलुओं का परिचय।</p> <p>CO३: प्रयोजनमूलक भाषा तथा अनुवाद की भूमिका का परिचय।</p>
		प्रादेशिक साहित्य ०९	<p>CO१: साहित्य आस्वादन अभिरुची का परिचय।</p> <p>CO२: जीवन मूल्यों के प्रति आस्था।</p> <p>CO३: प्रादेशिक साहित्य का ज्ञान।</p> <p>CO४: भारतीय साहित्य का अध्ययन।</p>

		आदी तथा मध्यकालीन हिन्दी साहित्य का इतिहास-१०	<p>CO१: साहित्य आस्वादन अभिरुची का परिचय ।</p> <p>CO२: जीवन मूल्यों के प्रति आस्था ।</p> <p>CO३: हिन्दी साहित्य की परम्परा से परिचय ।</p>
		साहित्यशास्त्र-११	<p>CO१: साहित्य चिंतन का अध्ययन ।</p> <p>CO२: साहित्यलोचना का परिचय ।</p> <p>CO३: साहित्य सृजन के संस्कार ।</p>
		मध्यकालीन काव्य-१३	<p>CO१: भारतीय भक्ती आंदोलन का अध्ययन ।</p> <p>CO२: रीतिकालीन संवेदना का अध्ययन ।</p> <p>CO३: कविता के माध्यम से मध्यकालीन सांस्कृतिक संवेदना का अध्ययन ।</p>
		आधुनिक हिन्दी साहित्य का इतिहास-१४	<p>CO१: साहित्य आस्वादन अभिरुचि का परिसंस्कार ।</p> <p>CO२: जीवन मूल्यों के प्रति आस्था ।</p> <p>CO३: हिन्दी साहित्य की परम्परा से परिचय ।</p>
		साहित्यशास्त्र-१५	<p>CO१: साहित्य चिंतन का अध्ययन ।</p> <p>CO२: साहित्यलोचना का परिचय ।</p> <p>CO३: साहित्य सृजन के संस्कार ।</p>
		प्रकल्प कार्य- १२-१६	<p>CO१: पठन - लेखन कौशल का विकास ।</p> <p>CO२: आलोचनात्मक क्षमता का विकास ।</p> <p>CO३: अनुसंधानात्मक दृष्टी का विकास ।</p>

Programme	Programme Specific Outcomes	Course	Course Outcomes	
B.A. Ist Year History	PSO१: या पेपरमधुन विद्यार्थ्यांना छ. शिवाजी महाराज व शिवकाळ या विषयी सामाजिक राजकीय, आर्थिक इतिहासाची माहिती मिळते.	Paper-I Shivaji and his Times	CO1: या पेपरमध्ये छ. शिवाजी महाराज यांचे कार्य, हिंदवी स्वराज्य स्थापना इत्यादी बाबी प्रमुख असुन विद्यार्थ्यांना देशप्रेम व देशभक्ती इत्यादी बाबी या पेपरमधुन समजतात.	
	PSO२: आधुनिक महाराष्ट्राच्या इतिहासाची राजकीय, सामाजिक, सांस्कृतिक, धार्मिक, माहिती मिळण्यास उपयोग होतो.	Paper- II History of Modern Maharashtra	CO1: या विषयाचा उपयोग विद्यार्थ्यांना आधुनिक महाराष्ट्राचा इतिहास कळण्यामध्ये होतो. महाराष्ट्राच्या राजकीय व सामाजिक, इतिहासाची उकल होण्यास मदत होते.	
	PSO३: मराठा साम्राज्याचा उदय व विस्तार छ. शाहू महाराजांच्या काळात पुन्हा कसा झाला याचे भाकत्मक या विषयातून मुलांना होते.	Paper-III History of Marathas 1760-1818 A.D.	CO1: या पेपरमध्ये मराठी साम्राज्याच्या विस्तार उत्तर हिंदुस्तानात कसा झाला, अटकेपार मराठ्यांच्या साम्राज्य विस्तार, तसेच मराठा साम्राज्याचे पतन कळून येतात.	
	PSO४: इ.स. १९०५ ते १९६० या काळातील महाराष्ट्राचा राजकीय, सामाजिक, सांस्कृतिक इतिहास या विषयी माहिती मुलांना मिळते.	Paper- IV 20 th Century Maharashtra (1905-1960) A.D.	CO1: या पेपरचे वैशिष्ट्य म्हणजे विसाव्या शतकात महाराष्ट्रातील राजकीय व सामाजिक स्थित्यंतरे कसे झालेत, भारतातील स्वातंत्र्यलढा कसा यशस्वीपणे लढला गेला याचे आकलन होते.	
	B.A. IInd Year	PSO५: इ.स. पूर्व ते इ.स. ३०० पर्यंतचा भारताचा प्राचीन इतिहास मिळण्यास मदत होते.	Paper-V History Early India (Up to 300 A.D)	CO1: या पेपरमध्ये प्रारंभापासुन प्राचिन भारताचा इतिहास या विषयी माहिती दिली गेली आहे. प्राचिन भारताचा राजकीय, सामाजिक, सांस्कृतिक, आर्थिक, इतिहास, प्राचिन भारतीय कला साहित्य, संस्कृती याचे ज्ञान होते. प्राचिन भारतीय वास्तूकला, शिल्पकला याचे दर्शन होते.
		PSO६: भारतातील दिल्लीच्या सुलतान शाहीचा मध्ययुगीन कालीन इतिहास याविषयी माहिती मुलांना मिळते.	Paper- VI History of Delhi Saltanat	CO1: या पेपरमध्ये मध्य-कालीन भारतावर परकीय आक्रमणे, सुलतान शाहीचा उदय, विकास, इत्यादी बाबी कळून येतात.
		PSO७: प्राचीन भारताचा इतिहास व संस्कृतीचा या विषयाचे ज्ञान मुलांना दिले जाते.	Paper- VII History of India (B.C. इ. पूर्व 300 ते ६५८ AD)	CO1: या पेपरमध्ये प्राचिन भारताच्या इतिहासाचा भाग येतो. या पेपरमुळे विद्यार्थ्यांच्य मनामध्ये देशभक्ती, प्राचिन भारताचा राजकीय, सामाजिक, सांस्कृतिक, आर्थिक इतिहास कळून येतो. प्राचिन भारतीय शिल्पकला, वास्तूकला, चित्रकला, मंदिरशैली इ. गोष्टी कळून येतात.

B.A. IIIrd Year	PSO८: मुगल कालीन भारताचा राजकीय, सामाजिक, आर्थिक, व्यापार, उद्योगधंदे, याविषयी माहिती मिळण्यास मदत होते.	Paper- VIII History of Mughal India	CO1: या पेपरमध्ये मुघलकालीन इतिहास, व्यापार, उद्योगधंदे, अर्थव्यवस्था, सामाजिक व राजकीय इतिहास याचा अभ्यास केला जातो.
	PSO९: पुरातत्व शास्त्राची माहिती व पुरातत्व शाखेतील संशोधन कसे करावे याचे ज्ञान विद्यार्थ्यांना होते.	Paper- IX Histrography	CO1: या पेपरमध्ये पुरातत्व शास्त्राची ओळख विद्यार्थ्यांना होते त्यामुळे काही विद्यार्थी पुरातत्व शाखेकडे संशोधनासाठी करण्यास प्रवृत्त होतात.
	PSO१०: या पेपरमधुन भारतीय स्वातंत्र्य करण्याची माहिती विद्यार्थ्यांना करून दिले.	Paper- IX History of Indian National Movement	CO1: या पेपरमुळे भारतीय स्वातंत्र्यलढ्याची ओळख विद्यार्थ्यांना होते. विद्यार्थ्यांच्या मनामध्ये राष्ट्रप्रेमाची भावना निर्माण होते.
	PSO११: आधुनिक चिन्चा, राजकीय, सामाजिक, धार्मिक, इतिहास, मुलांना माहित करून दिला जातो.	Paper- XI History of Modern China (1902-1960 A.D.)	CO1: आधुनिक चिन्चा इतिहासावर दृष्टीक्षेप टाकता येतो.
	PSO१२: विद्यार्थ्यांना संशोधन कार्य करण्यास प्रवृत्त केले जाते.	Project Work Paper- XII/ XVI	CO1: विद्यार्थ्यांना संशोधन कार्यात येण्यासाठी या पेपरचा उपयोग होतो. काही विद्यार्थी P.G. करण्यासाठी Archaeology हा विषय घेतात. त्यामध्ये विद्यार्थ्यांना Carrer च्या चांगल्या संधी मिळतात.
	PSO१३: यातून मुलांना पुरातत्व शास्त्र, पर्यटनशास्त्र, आणि वस्तुसंग्रहालय शास्त्र याची माहिती देणे.	Fields of History Paper-XIII	CO1: या विषयामुळे विद्यार्थ्यांना पुरातत्वशास्त्र, पर्यटनशास्त्र व वस्तुसंग्रहालय शास्त्र व याची ओळख होते.
	PSO१४: मराठवाड्याच्या राजकीय, सामाजिक, सांस्कृतिक, इतिहासाची ओळख करून देणे.	Landmarks of History in the Modern World Paper XIV	CO1: आधुनिक जगाचा इतिहास अत्यंत चांगल्या पध्दतीने कळून येतो. CO2: जगाची संस्कृती, इतिहास, यांचे विद्यार्थ्यांना आकलन होते.
		Paper-XV Glimpses of History of Marathwada	CO1: मराठवाड्याचा राजकीय, सांस्कृतिक, सामाजिक, इतिहासाची आकलन विद्यार्थ्यांना होते.

Programme	Programme Specific Outcomes	Course	Course Outcomes
B.A. Ist Year Geography	<p>PSO१: प्राकृतिक भूगोलाची माहिती विद्यार्थ्यांना मिळते.</p> <p>PSO२: भूपृष्ठाच्या बदलांची व सीज प्रक्रीयांची माहिती मिळते.</p> <p>PSO३: मानवी भूगोलाची उत्क्रांतीची कल्पना येते.</p> <p>PSO४: महाराष्ट्राची राजकीय भूगोल पूर्ण परिचीत झाला.</p> <p>PSO५: प्रमाणाचे प्रकार मुलांनी समजून आले.</p> <p>PSO६: नकाशा वाचनाची मुलांना कल्पना आली.</p> <p>PSO७: हवा व हवामानाची सररचना मुलांना समजली.</p> <p>PSO८: लोकसंख्येची घनता, वाढ आणि घट त्याचे परिणाम मुलांना कळाले.</p> <p>PSO९: सागरविषयी मुलांना विस्तृत माहिती मिळाली.</p>	<p>Paper-I प्राकृतिक भूगोल</p>	<p>CO१ : Introduction of Physical Geography -</p> <p>CO२ : सूर्यकुल व भुगोलाची व शाखांची ओळख झाली.</p> <p>CO३ : साररचना - पृथ्वीचे अंतरंगाचा वेध घेतला. पृथ्वीवरील जमीनीच्या भौगोलिक हालचाली लक्षात आल्या.</p> <p>CO४ : खडक-खडक रचना व प्रकार वर्गीकरण याबद्दल माहिती मिळाली.</p>
		<p>Paper- II मानवी भूगोल</p>	<p>CO१ : मानवी उत्क्रांतीचा इतिहास अवगत झाला.</p> <p>CO२ : विकसीत भूभागामधील आदीम जमाती चे वास्तव स्वरुप ज्ञान झाले.</p> <p>CO३ : वंश वंशाबद्दल खरी माहिती माहित झाली.</p> <p>CO४ : वसाहती या मूलभूत गरजा आहेत. जाणिव झाली.</p>
		<p>Paper-III भूमी स्वरुप</p>	<p>CO१ : भूपृष्ठाच्या झीज प्रक्रियेची माहिती मिळाली.</p> <p>CO२ : क्षरण - विदारण प्रक्रिया व प्रकार मुलांना कळाले.</p> <p>CO३ : भौगोलिक कारणे - भूपृष्ठावरील खनन वहन भरण ही प्रक्रिया कळाली.</p> <p>CO४ : भौगोलिक सहसंबंध - वसाहती चा पर्यावरणाशी संबंध मुलांच्या लक्षात आला.</p>
		<p>Paper-IV महाराष्ट्राचा प्रादेशिक भूगोल</p>	<p>CO१ : स्पर्धा परिक्षेच्या दृष्टीने महाराष्ट्राचे महत्व समजले</p> <p>CO२ : महाराष्ट्राची भौगोलिक ओळख समजली.</p> <p>CO३ : महाराष्ट्रातील आर्थिक कणा शेती-महत्वाची जागृतता झाली.</p> <p>CO४ : महाराष्ट्राचे औद्योगिक धोरण देशाच्या दृष्टीने किती महत्वाचे ज्ञात झाले.</p>

B.A. IInd Year		Paper-V प्रात्यक्षिक भूगोल	<p>CO१ : प्रमाणरेषा - प्रमाणाचे रुपांतरण करण्यास शिकले. प्रमाणाचे प्रकारही ओळखू लागले.</p> <p>CO२ : उठाव - उठावाच्या उद्धृती किती कोणकोणत्या हे लक्षात घेऊन काढू लागले.</p> <p>CO३ : उतार - उठाव. उठावाच्या पद्धतीमुळे मुले नकाशा सहज वाचतात.</p> <p>I) नकाशा वर्गीकरण : नकाशा लहान / मोठा करण्यास शिकले.</p> <p>II) वेगवेगळे उतार, सपाट कागदवर ओळखू लागले.</p> <p>III) सांके. चिन्हे यामुळे मुले SOI Map चे वाचन सहज करतात.</p>
		Paper- VI वातावरणशास्त्र	<p>CO१ : हवा- हवामान : पृथ्वीवरील हवेच्या बाबतीत माहिती मिळाली. साररचनाही कळाली.</p> <p>CO२ : सौरशक्ती तापमान : पृथ्वीवरील तापमानाचे चलनवलन मुलांना कळाले. उर्जाचे बजेट कळाले.</p> <p>CO३ : हवेचा दाब व वारे : जलचक्र व दृष्टीबदल माहिती मुलांना मिळाली. आर्बर्त कुठे व कशामुळे तयार होतात हे कळाले.</p> <p>CO४ : हवामानाचा जिवनावर परिणाम लक्षात आला. हवामान बदलामुळे मानवी जीवनही बदलले हे कळाले.</p>
		Paper- VII लोकसंख्या भूगोल	<p>CO१ : लोकसंख्या व लोकसंख्येची अंगे ज्ञात झाली.</p> <p>CO२ : विकासाच्या दृष्टीने लोकसंख्या व्याप्ती कशी असावी.</p> <p>CO३ : भारतातील लोकसंख्या एक समस्या माहिती मिळाली.</p> <p>CO४ : लोकसंख्या वाढ नियंत्रणासाठी उपाययोजना किती गरजेची आहे. ज्ञात झाले.</p>
		Paper- VIII	<p>CO१ : सागरशास्त्र- भूपृष्ठावरील महासागर रचना, व्याप्ती & महत्व पटले कळाले.</p> <p>CO२ : तळरचना - महासागराची तळरचना व वैशिष्ट्ये लक्षात आली.</p> <p>CO३ : क्षारता - तापमान : महासागराची क्षारता, तापमान वेगवेगळे असते. याची कारणे कळाली.</p>

B.A. IIIrd Year		CO४ : सागरतळातील संचयन संकल्पना कळाली. तयात साधनसंपत्ती किती दडलेली आहे. हे कळाले.
	Paper- IX वसाहत भूगोल	CO१ : वस्तीभूगोल व मानवाची गरज सहसंबंध कळाला CO२ : जगातील वसाहतीची प्रारूपे समजली. CO३ : वसाहतीचे महत्व व गरज ओळखता आली. CO४ : वस्ती भूगोल अभ्यासाचे महत्व
	Paper- X प्रात्यक्षिक भूगोल	CO१ : हवामान घटक उपकरणाच्या सहाय्याने सहल समजले. CO२ : सांख्यिकीचे रूपांतर आकृत्या या सहाय्याने समजले.
	Paper - XI Physical Geography of India भारताचा प्राकृतिक भूगोल	CO१ : भारत व भारताशेजारी कोण कोण आहेत याची कल्पना आली. तुलनेत भारत कसा वैभवशाली आहे हे कळाले. CO२ : भारतातील जलाचे अस्तित्व कसे हे कळाले. मान्सून केव्हा व कसा येतो हे मुलांच्या लक्षात आले. CO३ : भारतातील माती किती प्रकारची आहे हे त्याच्या विवरणावरून स्पष्ट झाले.
	Paper - XII पर्यावरण भूगोल	CO१ : पर्यावरण भूगोल - अभ्यास काळाची गरज CO२ : पर्यावरण - महत्व - मानव सहसंबंध CO३ : पर्यावरण भूगोल - समस्या - परिणाम व उपाय - काळाची गरज CO४ : पर्यावरणीय समस्यांचा अभ्यास
	Paper - XIII महाराष्ट्राचा औद्योगिक भूगोल	CO१ : महाराष्ट्राच्या औद्योगिकतेचा विकास व पायाभूत सुविधा CO२ : महाराष्ट्रातील आर्थिक सुबतेचे मुख्य स्रोत - उद्योग CO३ : साखर उद्योग व कापड उद्योगाचे वितरण CO४ : उद्योगाच्या समस्या
	Paper - XIV	CO१ : कृषीची सुरुवात कशी, कुठे, कधी झाली हे विद्यार्थी जाणतो.

		भारतातील कृषी भूगोल	<p>CO२ : कृषीचे उपयोजन, वितरण जाणतो.</p> <p>CO३ : भारतातील मुख्य पीकांचे उत्पादन वितरण जाणतो.</p> <p>CO४ : हरितक्रांती कशी, केव्हा झाली हे जाणतो.</p>
		Paper - XV नैसर्गिक आपत्ती भूगोल	<p>CO१ : आपत्ती भूगोल - आपत्तीच्या अभ्यासाचे भौगोलीक महत्त्व</p> <p>CO२ : भूकंप, ज्वालामुखी - आपत्तीच जाणिव.</p> <p>CO३ : अवर्षण, पूर, व जैविक आपत्तीची दाहकता- आकलन</p> <p>CO४ : प्रदूषण, आम्लपर्जन्य व वैश्विक तापवृद्धी- गांभिर्य- ज्ञात</p>
		Paper - XVI प्रार्यक्षिक भूगोल	<p>CO१: सांख्यिकी च्या सहाय्याने सरासरी, मध्यका, विचलन काडणे सहज समजले.</p>
		Paper- XVII जैविक भूगोल	<p>CO१ : जैविक भूगोल - भौगोलिक अभ्यासाचे मुख्य स्रोत</p> <p>CO२ : पर्यावरण व जैविक घटक परस्पर अनुबंधीत - जाणिव</p> <p>CO३ : वनश्री वितरण व प्राणि वितरण - परस्पर पूरक - ज्ञात</p> <p>CO४ : परिसंस्था व जैविकता महत्त्व - समजले</p>

Programme	Programme Specific Outcomes	Course	Course Outcomes
B.A. Political Science	<p>PSO01: To understand social, economic, historical, geographical, political, ideological and philosophical tradition and thinking.</p> <p>PSO02: To empower graduates to appear for competitive examinations and postgraduate programme.</p> <p>PSO03: To understand the need for a constitution and the role of constitution in a democratic society.</p> <p>PSO04: To explain the governmental mechanism from Gram Panchayat to parliament and suggest solutions over issues in its functioning and implementation.</p> <p>PSO05: To understand political concepts and ideology for analyzing new situations.</p> <p>PSO06: To acquire skills of political analyst, political party adviser, as a research scholar or freelance political thinker and writer.</p> <p>PSO07: To understand and apply the political developments towards decentralization and regionalization</p>	Paper-I Introduction to Political Theory	<p>CO1: To understand the basics of political science.</p> <p>CO2: To study the development of rights- state backgroundof political history.</p> <p>CO3: To analyze transitions in societal systems the structureand order of the system.</p>
		Paper-II Government and Politics of Maharashtra	<p>CO1: To establish pattern of Maharashtra State.</p> <p>CO2: To examine the government and non-governmentresponses.</p> <p>CO3: To understand history of the Freedom Movement inIndia collected from the Bombay Government Records.</p>
		Paper- III Introduction to Political Theory	<p>CO1: To define terms in a social science outside their immediate area of expertise.</p> <p>CO2: To create awareness among students about democracy.</p> <p>CO3: To help students to understand social and politicalvalues in Indian political system.</p> <p>CO4: To understand the concept of welfare state andpolitical values in Indian political system.</p> <p>CO4: To understand the concept of welfare state.</p>
		Paper- IV Government and Politics of Maharashtra	<p>CO1: To study elections and election process.</p> <p>CO2: To provide solution to social problems.</p> <p>CO3: To study Panchayat raj History.</p> <p>CO4: To orient the students about ideology and programme of political parties in Maharashtra.</p>

B.A. IInd Year	Paper-V Indian Government and Politics	<p>CO1: To study the prosperity of society.</p> <p>CO2: To understand political events in government of India.</p> <p>CO3: To understand basic principles of Indian constitution.</p> <p>CO4: To study the Indian constitution.</p>
	Paper-VI International Relations	<p>CO1: To understand the behavior of individual entrepreneurs and firms rather than world politics, liberalism.</p> <p>CO2: To understand important implications for international law and international relations.</p> <p>CO3: To explain basic concepts in international relations.</p> <p>CO4: To understand the stages of development of international relation as a separate discipline</p>
	Paper-VII Indian Government and Politics	<p>CO1: To explain structure of union government and budgetary process in India.</p> <p>CO2: To understand the framework of Indian supreme court.</p> <p>CO3: To explain party system and electoral reforms.</p> <p>CO4: To evaluate the federal structure and centre state relation.</p>
	Paper-VIII International Relations	<p>CO1: To explore the nature of informal reasoning in international relations and to consider how instruction could help enhance.</p> <p>CO2: To study various international and regional organization.</p> <p>CO3: To aware the students about major issues in internationalism.</p> <p>CO4: To evaluate critically the non-alignment movement.</p>

B.A. IIIrd Year	Paper- IX Indian Political Thinkers	<p>CO1: To understand modern political thinker's contribution.</p> <p>CO2: To learn the problems in cultural transformation of Indians into non- Indians.</p> <p>CO3: To study the religious, political, social and cultural thoughts of Indian political thinkers.</p>
	Paper-X Western Political Thinkers 33	<p>CO1: To understand the views of western political thinkers.</p> <p>CO2: To understand the ideas of western political thinkers and its relevance.</p> <p>CO3: To understand the thoughts of Plato on various political concepts.</p> <p>CO4: To know ideas of Aristotle and his role in western politics.</p>
	Paper- XI Paper Political Ideologies	<p>CO1: To study the development and features of political ideologies.</p> <p>CO2: To understand relevance of political ideology in contemporary period.</p> <p>CO3: To study the origin of ideologies and clash of three political ideologies - liberalism, communism, and fascism.</p> <p>CO4: To correlate the theoretical discussion and analysis of ideologies to the transformations.</p>
	Paper-XIII Indian Political Thinkers	<p>CO1: To study Dr. B. R. Ambedkar's thoughts on democracy, economy and society.</p> <p>CO2: To evaluate critically M. N. Roy's radical humanism.</p> <p>CO3: To understand Nehru's democratic and secular views and its applicability.</p> <p>CO4: To know of ideas of Maulana Azad views on religion and politics</p>

		Paper-XIV Western Political Thinkers	<p>CO1: To present thoroughly the wealth of historical and institutional materials.</p> <p>CO2: To study the thoughts of J. S. Mill and its applicability.</p> <p>CO3: To evaluate critically the thoughts of Karl Marx and its relevance.</p> <p>CO4: To understand the theory of utilitarianism.</p>
		XV Political Ideologies	<p>CO1: To study of ideology of socialism.</p> <p>CO2: To evaluate critically the ideology of fascism.</p> <p>CO3: To study the development and features of communism.</p> <p>CO4: To explain the ideology of feminism.</p>
		Paper XII/XVI Project Work	<p>CO1: Student Develop interest in research</p> <p>CO2: Students are aware of social issues</p>

Programme	Programme Specific Outcomes	Course	Course Outcomes
<p>B.Sc. Chemistry</p>	<p>PSO1: Students will gain an understanding of bonding fundamentals, periodic properties and group properties.</p> <p>PSO2: Students will gain basic knowledge of types of organic reaction, mechanism of organic reactions and stereochemistry.</p> <p>PSO3: Students will be able to perform experiments and acquire laboratory skills.</p> <p>PSO4: Students will understand states of matter, molecular structure and colloidal state. Basic concepts of Chemical Kinetics of Catalysis.</p> <p>PSO5: Students will understand the noble gas, Interhalogonol compounds including nuclear concept & analytical Chemistry basics will develop basic analytical skills. Students will understand basic functional group chemistry such as alcohols, Phenols, aldehydes & Kethous, carboxylic acids etc.</p> <p>PSO6: Students will understand the concepts of thermodynamics and energetics.</p> <p>PSO7: Will develop moderate analytical skills.</p>	<p>Inorganic Chemistry I</p>	<p>CO1: The ability to demonstrate knowledge and understanding to describe the structure of atoms in terms of protons, neutrons and electrons</p> <p>CO2: Scientific use the periodictable to quickly refer to information about the term atomic mass and chemical symbol.</p> <p>CO3: The Periodic Table's s-block components are those of which the last electron enters the outermost s- orbital. The elements in group I & II of the periodic tableare collectively known as alkali metals</p> <p>CO4: The p-block group contains about 35 elements, including metals, nonmetals and metalloids. p-block elements include the groupof halogens and inert gases which are industrially very important</p>
		<p>Organic Chemistry II</p>	<p>CO1: This chapter gives the basic information of organic chemistry which includes the concepts like inductive effect,mesomeric effect, resonance effect and hyper conjugation effects.</p> <p>CO2: This chapter deals with certain mechanistic information i.e. how organic reactions takes place and what are the factors which affect the reactions.</p> <p>CO3: This chapter includes basic stereo chemical aspects suchas optical isomerism, geometrical isomerism and confirmational isomerism.</p> <p>CO4: To make aware about Basic saturated hydrocarbon related concepts such as preparation, structure and chemical properties</p> <p>CO5: To make aware about Basic unsaturated hydrocarbon (alkene)related concepts suchas preparation, structure and chemical properties</p> <p>CO6: To make aware about Basic aromatic hydrocarbon related concepts such as preparation, structure and chemical reactions</p> <p>CO7: Organic mono and dihalo compounds like vicinal and germinal dihallides. Nucleophilic substitution reactions and chemical Reactions</p>
		<p>Lab Course III and IV</p>	<p>CO1: To develop basic laboratory skills among students</p>
		<p>Physical Chemistry V</p>	<p>CO1 : Correlate chemistry withmathematics, use of mathematics in chemistry</p> <p>CO2: To know the states of matterand difference between them. Understanding the laws and their use in deduction of equation</p>

	<p>PSO8: Will understand the concepts of Phase rule and conductance.</p> <p>PSO9: Develop Skill of Laboratory techniques.</p>		<p>CO3: To understand the molecular structure and introduction to intermolecular forces and study liquid crystals.</p> <p>CO4: Study of different types of solids. X ray diffraction and introduction to Braggs equation.</p> <p>CO5: To understand the colloidal chemistry, types of colloidal system. To know gold number and properties of colloidal systems.</p> <p>CO6: To know the kinetics of reactions. Introduction to Catalysis.</p>
	<p>PSO10: Students will understand quantum Chemistry, basics of spectroscopy and fundamentals of Photochemicals.</p> <p>PSO11: Students will understand basic Principal of organic spectroscopy, methods of synthesis of organic compounds their uses in day today</p>	Inorganic Chemistry-VI	<p>CO1: Noble gas chemistry, inert gases, chemistry of Xe Compounds</p> <p>CO2: Basic inorganic concepts, covalent, ionic, van-der- Waal's bonding, metallic bonding, hydrogen bonding etc.</p> <p>CO3: Nuclear concept, binding energy, mass defect, nuclear reactions, Carbon dating</p> <p>CO4: Types of indicators, titration, acid base, complexometric, redox etc.</p>
		Lab Course VII and VIII	CO1: Qualitative and quantitative Analysis.
	<p>PSO12: Students develop the skill on Different methods of Qualitative and Quantitative analysis</p>	Organic Chemistry VII	<p>CO1: Aliphatic hydroxyl compounds, preparation, reactions etc,</p> <p>CO2: Aromatic hydroxyl compound preparation, reactions</p> <p>CO3: Carbonyl compounds, structure of carbonyl comps, preparation, reactions</p> <p>CO4: Mono, di & tricarboxylic acid, preparation reactions etc.</p> <p>CO5: Aliphatic nitro comps, nitroarenes, amines etc. preparation, reactions, etc</p>
	<p>PSO13: The ability to implement Chemistry in integral activity of social economic and environmental problems.</p>	Physical Chemistry VIII	<p>CO1: To know the introduction to energetics and the changes in energy of the systems. will understand the law of thermodynamics.</p> <p>CO2: To understand the limitation of first law and importance of second law. Will understand the Carnot cycle and efficiency of engine.</p> <p>CO3: To know the law of mass action and study of isochore and isotherm.</p>
	<p>PSO14: Knowledge of safety handling of Chemicals in the Chemical Laboratory.</p>	Lab Course IX	CO1: To develop skill in quantitative inorganic and organic analysis.
		Inorganic Chemistry X	CO1:
	<p>PSO15: Identify and describe the basic Principles behind chemical techniques relevant to academic and social</p>	Physical Chemistry- II	<p>CO1: To know the terms of phase rule and will understand the different systems based on phase rule.</p> <p>CO2: To know the conductance of solution. To know the conductivity. Arrhenius equation and conductometric Titration.</p> <p>CO3: To understand the electrolytic cell and different types of cell. To understand the Nernst equation.</p>

		Lab Course XII	CO1: Develop skill in instrumental method of chemical analysis and organic synthesis.
		Physical Chemistry XVII	CO1: To understand the quantum chemistry. Understand the Schrodinger equation and quantum numbers. CO2: To understand the Basics of spectroscopy related to physical chemistry CO3: To know the laws of photochemistry and their importance. CO4: To understand the basics and importance of different physical properties and their importance in the study of molecular structure. CO5: To understand the basics of nanomaterial. To know the nanotechnology branch in the study of material science.
		Organic Chemistry XVIII	CO1: Awareness in basic principles of spectroscopy, Instrumentation, analyzing structure of organic compound using spectroscopic methods. CO2: Knowledge of synthesis, structure, and synthetic applications. CO3: Learn synthesis of aceto acetic ester and diethyl malonate with enolates intermediates and synthetic Applications. CO4: Make curacy occurrence, isolation, structure, synthesis, and applications of Fats, Oils and Detergents
		Lab Course XIX and XX	CO1: Develop skill in Qualitative and Quantitative Organic analysis.
		Inorganic Chemistry XXI	CO1: Complex formation, valence bond theory, crystal field Theory CO2: Charge transfer spectra, spectrochemical series, Orgel energy diagram, CO3: Alkyl and aryl Li compound, Al, Hg, Sn, Ti, metal ethylenic Compound CO4: Biological process, haemoglobin, myoglobin. Biological role of Na, K, nitrogen fixation CO5: Paper chromatography, thin layer chromatography, application etc.
		Organic Chemistry XXII	CO1: Know about the most important simple heterocyclic systems containing heteroatom and their systems of nomenclature and numbering. Understand and discuss the reactivity and stability of hetero aromatic compounds. Study the important synthetic routes and reactivity for five and six member hetero aromatic compounds. Understand the important physical and chemical properties of five and six member and condensed hetero aromatic compounds.

			<p>CO2: Learn how to classify carbohydrates, recognize molecules with chiral centers and draw Fischer projections. Learn how to classify the monosaccharides, disaccharides, and polysaccharides learn their chemical and physical properties. , Learn the major types of polysaccharides and their structural and biological features.</p> <p>CO3: After studying this students will be able to explain the terms - monomer, polymer and polymerization and appreciate their importance; distinguish between various classes of polymers and different types of polymerizations processes; appreciate the formation of polymers from mono, describe the preparation of some important synthetic polymers and their properties; importance applications of polymers in daily life.</p> <p>CO4: To acquire basic knowledge about dyes. Study of dyes from xanthene, Diphenyl and triphenyl methane dyes, anthraquinone and Heterocyclic dyes, Explain the term drug, ideal drugs. describe the classification of drugs; Synthesis and uses of some drugs.</p>
		<p>Lab Course XXIII and XXIV</p>	<p>CO1: Develop skill in instrumental method of chemical analysis and organic synthesis.</p>

Programme	Programme Specific Outcomes	Course	Course Outcomes
B.Sc.Physics	<p>PSO1: Understand basic concepts of Mechanics, Optics, Thermodynamics and Mathematical methods of Physics</p> <p>PSO2: Use effectively various basic measuring Instruments in laboratory</p>	Mechanics	<p>CO1: Describe acceleration due to gravity, Newton's law of gravitation and basics of potential and fields</p> <p>CO2: Discuss basic properties of matter, Young's modulus, Bulk modulus and Modulus of rigidity</p> <p>CO3: Discuss properties of matter especially viscosity and surface tension</p> <p>CO4: Define the general terms in acoustics intensity, loudness, reverberation etc.</p>
	<p>PSO3: Acquire Knowledge of mathematical Physics, Electronics, Statistical Physics and its applications</p> <p>PSO4: Understand basic Laws of practical Physics</p> <p>PSO5: Draw appropriate conclusions on outcomes of experiments</p> <p>PSO6: Acquire ability to understand different types of crystal structures, classical and quantum theory of specific Heat, Electrodynamics with applications and Fibre Optics and its uses</p>	Heat and Thermodynamics	<p>CO1: Define Thermal Conductivity, coefficient of thermal conductivity, Thermal diffusivity, and resistivity; give comparison of conductivities of various metals</p> <p>CO2: Describe reason for modification of gas equation; derive Vander Waals equation of state; define critical constants</p> <p>CO3: Explain Transport phenomenon, mean free path with expression, thermal conductivity and viscosity</p> <p>CO4: Formulate and solve problems in Thermodynamics and Heat; explain adiabatic Process, isothermal process, reversible process, irreversible process and derive relevant equation, draw indicator diagram</p> <p>CO5: Derive Thermodynamic parameters, Heat engine and Carnot Heat Engine, Maxwell's equation and their applications</p>

	<p>PSO7: Understand and apply simple basics of Quantum mechanics</p> <p>PSO8: Understand and solve Maxwell's equations</p> <p>PSO9: Gain comprehensive knowledge of various techniques used in laser and its applications</p>	Geometrical and Physical Optics	<p>CO1: Describe and determine concept of cardinal point and different eye pieces</p> <p>CO2: Explain interference phenomenon of light and its relevant experiments</p> <p>CO3: Explain concept of diffraction of light and grating</p> <p>CO4: Describe polarization of light and its related Experiments</p>
		Electricity and Magnetism	<p>CO1: Describe the concept of Scalar, vector triple product of vector algebra and Solve divergence, gradient and curl</p> <p>CO2: Explain Coulomb's law, Gauss law and dielectrics with mathematical derivation</p> <p>CO3: Explain the concept of Biot-Savrat's Law, Ampere's Law and Ballistic Galvanometer</p> <p>CO4: Elaborate growth and decay of LCR circuit</p>
		Mathematical Physics and Relativity	<p>CO1: Explain partial differentiation, successive differentiation and total differentiation</p> <p>CO2: Describe ordinary differential equation and solutions of first and second order differentiation equation</p> <p>CO3: Elaborate theories and methods of statistical Physics and quantum statics</p> <p>CO4: Explain principle of special theory of relativity and derive relevant equations including Einstein equation</p>
		Modern Physics	<p>CO1: Explain Photoelectric Effect and its applications in various processes</p> <p>CO2: Describe X- Ray radiation and its spectra</p> <p>CO3: Explain theoretical aspect of Atomic mass, nuclear fission and Energy released in nucleus</p>

			CO4: Describe Particle accelerator, Cyclotron and Deuterons
		General Electronics	<p>CO1: Describe semiconductors, Zener diode, Transistor and give its application</p> <p>CO2: Explain Amplifier, RC coupling and Transistor biasing and discuss its applications</p> <p>CO3: Describe theoretical and practical aspects of Oscillator and Multi-vibrator</p> <p>CO4: Elaborate modulation, FM Modulation and AM wave</p>
		Solid State Physics	<p>CO1: Explain types of solids, miller indices, inter planner spacing and different types of Crystal structures</p> <p>CO2: Elaborate concept of inter atomic forces and Kroning Penney Model</p> <p>CO3: Describe classical theory of lattice heat capacity and Debye model; discuss limitations of Debye model</p> <p>CO4: Discuss applications of free electron theory of Metals, Hall effect, Hall voltage and Hall coefficient and importance of Hall Effect</p> <p>CO5: Describe transport properties of electrical conductivity thermal conductivity</p>
		Classical and Quantum Mechanics	<p>CO1- Explain basic concept of Classical Mechanics, mechanics of particle, and mechanics of system of particle by using Newton's laws of motion</p> <p>CO2- Derive Lagrange's equation and its various applications</p> <p>CO3- Explain basic concepts of constraints, its types and Virtual work done</p>

			<p>CO4- Discuss mathematical basics of quantum mechanics, explain matter wave, Group velocity, particle velocity, operators, wave function and expectation values</p> <p>CO5- Derive Schrodinger time dependent and independent equation and describe particle in one-dimensional box</p>
		Electrodynamics	<p>CO1: Describe and understand diversions, curl, and Gauss Law applications in Electrostatics</p> <p>CO2: Explain concepts of self-induction, mutual induction and equation of continuity</p> <p>CO3: Describe origin of Maxwell's equations in magnetic and dielectric media</p> <p>CO4: Derive electromagnetic wave equation in conduction medium</p> <p>CO5: Explain transport of energy and poyinting vector, poyinting theorem</p> <p>CO6: Describe boundary condition for electromagnetic field vectors B, E, D and H</p>
		Atomic, Molecular Physics & LASER	<p>CO1: Explain Thomson's atom model, Rutherford's nuclear atom model and Bohr's atom model</p> <p>CO2: Describe the concepts of Vector atom model, quantum numbers, Coupling Scheme and Pauli's exclusive principle</p> <p>CO3: Explain Zeeman Effect and Stark effect</p> <p>CO4: Describe Rotation, Vibration Spectra, Raman Effect and its applications in various fields</p> <p>CO5: Discuss LASER system and its properties, types of LASER and its medical, biological and industrial applications</p>
		Non-conventional Energy Sources	<p>CO1: Explain the concept of technologies of non-conventional sources of energy</p>

		and Optical Fiber	<p>CO2: Describe various renewable energy technology</p> <p>CO3: Discuss non-conventional energy sources: Biomass, wind energy, tidal energy, ocean energy, geothermal energy and solar energy</p> <p>CO4: Elaborate the concept of solar energy and its applications in various fields</p> <p>CO5: Describe structures of optical fibers</p> <p>CO6: Describe fiber fabrication techniques and testing of optical fiber cables</p>
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Programme	Programme Specific Outcomes	Course	Course Outcomes
B.Sc.Mathematics	<p>PSO1: Acquire knowledge in basic Mathematics</p> <p>PSO2: Communicate solutions of mathematical problems effectively</p> <p>PSO3: Equip knowledge in various concepts involve in Calculus, differential equation, real analysis and algebra</p>	Differential Calculus	<p>CO1: Solve problems on limits continuity and successive differentiation of functions</p> <p>CO2: Determine partial derivative of function more than one variable</p> <p>CO3: Describe Rolle's Theorem, Lagrange's mean value theorem and Cauchy's mean value theorem</p> <p>CO4: Determine expansion of e^x, $\sin x$, $\cos x$, $\sinh x$, $\cosh x$, $\tanh x$, $\log(ax+b)$ etc.</p> <p>CO5: Determine gradient, divergence, curl and directional derivatives</p>
	<p>PSO4: Acquire a breadth and depth of understanding in mathematics</p> <p>PSO5: Understand reasonableness of solutions including sign, size, accuracy and units of measurement</p>	Differential Equations	<p>CO1: Determine solution of first order linear differential equation</p> <p>CO2: Determine solution of exact differential equation</p> <p>CO3: Determine solution of linear equation with constant coefficient using general and short method</p> <p>CO4: Determine solution of linear homogeneous differential equation</p> <p>CO5: Explain formation of partial differential equation by eliminating the arbitrary constants and function</p>
	<p>PSO6: Apply mathematical proof techniques in a wide variety of mathematical areas, including algebra and analysis</p>	Integral Calculus	<p>CO1: Apply reduction formula</p> <p>CO2: Find integration of algebraic rational functions</p> <p>CO3: Apply fundamental theorem of integral calculus</p> <p>CO4: Find the area bounded by a curve</p> <p>CO5: Calculate the length of arc of a curve.</p> <p>CO6: Find line integral and surface integrals</p>

			<p>CO7: Apply the theorems of Gauss, Green's and Stoke's theorem</p>
		Geometry	<p>CO1: Identify and use different type of equations of plane</p> <p>CO2: Determine equations of the system of planes and the length of perpendicular to a plane</p> <p>CO3: Determine equation of right line and the angle between the plane and line</p> <p>CO4: Determine condition for coplanar lines and short distance between two lines</p> <p>CO5: Determine equation of sphere and its intersection with the plane</p>
		Number Theory	<p>CO1: Describe division algorithm</p> <p>CO2: Determine GCD and LCM by using Euclidean algorithm</p> <p>CO3: Describe method of solving linear Diophantine equation</p> <p>CO4: Determine solution of linear congruence</p> <p>CO5: Describe Fermat's and Euler's theorem</p>
		Integral Transform	<p>CO1: Define beta and gamma functions and derive their properties and apply them in evaluating integrals</p> <p>CO2: Determine Laplace transform for various functions, properties of Laplace transforms</p> <p>CO3: Determine inverse Laplace transform, properties of inverse Laplace Transform, solve the problems using convolution theorem</p> <p>CO4: Determine Fourier transform, properties of Fourier transform, Fourier sine and cosine transforms</p> <p>CO5: Apply Laplace transform to find solutions of ordinary and partial differential equations</p>

		Mechanics-I	<p>CO1: Describe different types of forces, triangle law of forces, Parallelogram of forces, resultant of forces, sine rule.</p> <p>CO2: Explain resultant of several coplanar forces, equation of the line of action of the resultant, equilibrium of a rigid body under 3 coplanar forces</p> <p>CO3: Explain Lammi's theorem and polygon of forces</p> <p>CO4: Explain vector moment of a force and vector moment of couple and describe basic concepts of centre of gravity and its applications</p>
		Numerical Methods	<p>CO1: Explain Bisection Method, Method of False Position, Newton-Raphson Method</p> <p>CO2: Describe Finite Differences, Newton's Formula for Interpolation, Lagrange's Interpolation Formula, Divided Differences</p> <p>CO3: Describe Least Square Curve Fitting Procedures, Fitting a straight line, Chebyshev polynomial, Power series</p> <p>CO4: Calculate Solution of Linear system of equations, Eigen values and Eigen Vectors</p> <p>CO5: Calculate solution of ordinary differential equation by Taylor's series Method, Picard's Method, Euler's Method</p>
		Partial Differential Equations	<p>CO1: Solve Lagrange's equation</p> <p>CO2: Find different types of solutions like complete integral, Singular integral and general integral</p> <p>CO3: Determine the solution of partial differential equations using Charpit's Method</p> <p>CO4: Classify partial differential equations to special types</p> <p>CO5: Describe Monge's Method, Method of transformation</p>

		Mechanics-II	<p>CO1: Find velocity and acceleration in terms of vector derivatives, curvature, Angular speed and angular velocity</p> <p>CO2: Describe Radial and Transverse components of velocity and acceleration, areal speed and velocity</p> <p>CO3: Explain Newton's Law of motion, angular momentum, work, energy, vector point function, Field of force</p> <p>CO4: Describe motion under gravity, projectile, Motion of projectile, Parabola of safety, motion in resisting medium, areal velocity of central orbit, Pedal's equation</p>
		Real Analysis-I	<p>CO1: Describe sets, functions, real valued functions, countable sets, Least upper Bound axiom and greatest lower bound axiom.</p> <p>CO2: Give different types of sequences and its properties</p> <p>CO3: Describe limit superior, limit inferior and Cauchy sequence</p> <p>CO4: Explain basic concepts of series and absolute and conditional convergence of the series</p>
		Abstract Algebra-I	<p>CO1: Explain elementary concepts of sets, functions and integrals</p> <p>CO2: Describe group, subgroup, counting principle, Normal subgroup, Quotient groups, Homomorphism</p> <p>CO3: Define Ring, some special types of ring</p> <p>CO4: Describe Ideals, Maximal Ideals, Explain quotient ring, polynomial ring</p>
		Ordinary Differential Equations-I	<p>CO1: Classify different types of functions and Explain complex exponential function and their properties, Solve system of linear equations</p>

			<p>CO2: Describe and find the solution of first order linear differential equations</p> <p>CO3: Evaluate the solution of linear equations with constant coefficients</p>
		Real Analysis-II	<p>CO1: Find Limits in Metric spaces</p> <p>CO2: Explain continuous functions on Metric spaces</p> <p>CO3: Describe connectedness, completeness and compactness</p> <p>CO4: Describe set of Measure zero, Riemann integral, Fundamental theorem of calculus, Explain Fourier series.</p>
		Abstract Algebra-II	<p>CO1: Describe elementary basic concepts of vector spaces</p> <p>CO2: Explain Linear independence and bases</p> <p>CO3: Describe dual spaces and bi dual spaces, inner product spaces</p> <p>CO4: Explain modules with illustrations</p>
		Ordinary Differential Equations-II	<p>CO1: Evaluate the solution of linear equations with variable coefficients</p> <p>CO2: Identify the solutions are linearly dependent or independent using Wronskian and find the series solution of linear equations with analytic coefficients</p> <p>CO3: Describe and find the solution of linear equations with regular singular points</p>

Programme	Programme Specific Outcomes	Course	Course Outcomes
B.Sc.Botany	<p>PSO1: Understand the basic concepts of taxonomy and ecology</p> <p>PSO2: Acquire knowledge about economics and medicinal plants in agriculture and medicine</p>	Diversity of Cryptogams-I	<p>CO1: Identify various types of plants in kingdom Plantae</p> <p>CO2: Identify Cryptogams</p> <p>CO3: Identify various types of Algae</p> <p>CO4: Describe various types of bacteria</p> <p>CO5: Describe various types of fungi</p> <p>CO6: Identify various types of viruses</p>
	<p>PSO3: Analyse the relationship between plants and microbes</p> <p>PSO4: Understand the biology of diversity of seed plants or phanerogams</p>	Morphology of Angiosperms	<p>CO1: Describe various types of habitat habit and morphological characters</p> <p>CO2: Identify various types of root, stem and leaves</p> <p>CO3: Identify various types of inflorescence and flowers</p> <p>CO4: Identify various types of fruits</p> <p>CO5: Describe modifications of roots stems and leaves</p>
	<p>PSO5: Understand behaviours of fossils and gymnosperm plants</p>	Diversity of Cryptogams-II	<p>CO1: Describe Cryptogams</p> <p>CO2: Describe characteristic feature of Bryophytes</p> <p>CO3: Describe Characteristic feature of Pteridophytes</p> <p>CO4: Identify various types of Bryophytes</p> <p>CO5: Identify various types of Pteridophytes</p>
	<p>PSO6: Understand plant diseases, chemical properties and evolutionary relationship among taxonomic groups</p>	Histology, Anatomy and Embryology	<p>CO1: Describe various types of tissues</p> <p>CO2: Describe anatomical characters of monocot and dicot plants</p> <p>CO3: Describe various types of ovules</p> <p>CO4: Describe vascular elements in tissues</p>

		Taxonomy of Angiosperms	<p>CO1: Describe various Classification Systems of plants</p> <p>CO2: Describe characteristics of various angiosperm families</p> <p>CO3: Describe various taxonomic terminologies</p> <p>CO4: Describe importance of plant studies</p> <p>CO5: Describe various tools used in taxonomy</p>
		Plant Ecology	<p>CO1: Describe importance of plant studies</p> <p>CO2: Describe various terminologies used in ecology</p> <p>CO3: Describe soil structure and soil types</p> <p>CO4: Describe various methods of conservation</p> <p>CO5: Describe ecological adaptations in plants</p>
		Gymnosperms and Utilization of plants	<p>CO1: Differentiate angiosperm and gymnosperm</p> <p>CO2: Describe the characteristic feature of gymnosperm plants</p> <p>CO3: Describe economic importance of cereals pulses</p> <p>CO4: Describe importance of timber plants</p> <p>CO5: Describe medicinal values of plants</p> <p>CO6: Describe uses of plants and their parts in various industries</p>
		Plant Physiology	<p>CO1: Describe various physiological processes of plants</p> <p>CO2: Describe photosynthesis</p> <p>CO3: Describe transpiration</p> <p>CO4: Describe respiration</p> <p>CO5: Describe stomata and functions of stomata</p> <p>CO6: Describe osmosis</p>

		Cell & Molecular Biology	<p>CO1: Describe Cell and cell structure</p> <p>CO2: Describe molecular basis of cell</p> <p>CO3: Describe various types of cells</p> <p>CO4: Describe mitosis and meiosis</p> <p>CO5: Identify various cell organelles</p> <p>CO6: Describe various stages of cell division</p>
		Diversity of Angiosperms-I	<p>CO1: Describe various Classification Systems of plants</p> <p>CO2: Describe variations among angiosperm families</p> <p>CO3: Describe various types of keys used for plant identification</p> <p>CO4: Describe various floral characters of angiosperm families</p> <p>CO5: Describe importance of plant studies and uses of plants</p>
		Genetics & Biotechnology	<p>CO1: Describe genetics</p> <p>CO2: Describe the basic information about gene, hybridisation and genetic material</p> <p>CO3: Describe various genetic abnormalities</p> <p>CO4: Describe mutation and chromosomal aberrations</p> <p>CO5: Describe uses and applications of r-DNA technology</p>
		Diversity of Angiosperms – II	<p>CO1: Describe characteristic feature of various families of angiosperm plants</p> <p>CO2: Describe the importance of plants of various families</p> <p>CO3: Describe various tools used in taxonomy</p> <p>CO4: Describe botanical gardens, bio-reservoirs and conserved forests</p> <p>CO5: Describe herbariums and gene banks</p>

Programme	Programme Specific Outcomes	Course	Course Outcomes
B.Sc. Zoology	PSO1: On completion of programme student will able to understand classification of no chordate and Diversity of animal.	Animal Diversity- I (Protozoa to Echinodermata)	CO1: To know the general characters and classification of non-chordates and understand the diversity and complexity of life from Protista to Echinodermata. CO2: On completion of the course the students will be able to understand the general organization, diversity and adaptation of Non Chordates.
	PSO2: Student able to know about classification of chordate and Diversity of animal as well as genetics and heredity.	Cell Biology II ZOL-102:	CO1: The student will understand the architecture and functions of cell.
	PSO3: On completion of programme student know about animal.	DIVERSITY OF CHORDATA-II (Protochordata to Mammals) IV ZOL-05:	CO1: On completion of the course the student should be able to know the General organization of Chordates as a group and know the taxonomy and characteristic features of the various Chordate phyla. CO2:
	PSO4: Embryology, classification of chordate, Gene population, gene expression.	V: ZOL-I06	CO1: To study the hereditary biology and mechanism involved in hereditary diseases and disorders. CO2: The student will understand genetics and heredity.
	PSO5: On completion of this programme student able to know physiological process, organic compound vitamins and endocrine gland.	Vertebrate Zoology VII: ZOL-301	CO1: On completion of the course the students will be able to understand the classification of Vertebrate. The Student will learn the animal embryological study of frog and chick and Migration of birds.
	PSO6: Understand the nature of ecology & evaluation.	Genetics –II VIII: ZOL-302	CO1: On completion of the course the students will be able to understand the Gene expression, Population Genetics, Human Genetics, Microbial Genetics and Genetic Engineering. The Student will learn the about the Genetic code, Gene pool, gene frequency Twins Syndrome, Genetic disorder and rDNA

	<p>PSO7: Performance procedure as per laboratory standard in the area of ecology and evaluation.</p> <p>PSO8: Under the nature and basic concepts and Applied Biology.</p> <p>PSO9: Understand the applications of biological sciences in aquaculture.</p>	<p>Animal physiology XI: ZOL-401</p>	<p>CO1: On completion of the course the students will be able to understand the processes of Digestion, respiration, circulation, excretion, reproduction, nerve physiology and muscle physiology. The Student will learn the different function of body part and role of different hormones.</p> <p>CO2:</p>
		<p>Biochemistry and Endocrinology XII: ZOL-402</p>	<p>CO1: On completion of the course the students will be able to understand the classification of Enzyme, Carbohydrate, Protein, Lipids, and Vitamins. The Student will learn the metabolism of Carbohydrate, Protein, Lipids and Endocrine system of Vertebrates</p>
		<p>Ecology VX: ZOL-501</p>	<p>CO1: On completion of the course the students will be able to understand the Biotic and abiotic factor, Population, growth and regulation, Structure of community, ecosystem The Student will learn the Basic concept, Adaptation, component of ecosystem.</p>
		<p>Evolution XIX: ZOL-601</p>	<p>CO1: On completion of the course the students will be able to understand the theories of organic evolution origin of life, evidences of organic evolution and basic pattern of evolution. The Student will learn the chemical evolution of life. Evidence of organic evolutionsand fossil formations.</p>
		<p>Fishery Science-I & I XVI &XX</p>	<p>CO1: Student know about overview of commercial fishing & Sport fishing & also recent fish catch statistics. CO2: Deals with different species of fish require different habits & food sources for survival CO3: Useful to know the characters of streams, riverine systems in India & their fishery CO4: Useful to know the east coast river systems & West Coast river systems CO5: Subject includes different reservoirs of river systems in India. CO6: Develop business ideas and carry out investigative projects in the land-based sector (Aquaculture).</p>

Programme	Programme Specific Outcomes	Course	Course Outcomes
B.Sc. Computer Science	<p>PSO01: This programme makes learners aware of the history of computer science and conceptual underpinnings of the subject.</p> <p>PSO02: Students understand the nature of software development process, including the need to provide appropriate documentation</p> <p>PSO03: The programme empowers the graduates to appear for competitive examinations or choose the postgraduate programme of M. Sc. Computer Science</p> <p>PSO04: Student understand standard techniques for solving a problem on computers, including programming techniques and techniques of representation of information</p>	Computer Fundamental (CSO1)	<p>CO1: To make the students familiar with computer environment. CO2: To familiarize with the basics of Operating System and business communication tools</p> <p>CO3: To identify parts of a computer system.</p> <p>CO4: To explain adequately the functioning of computer components.</p> <p>CO5: To understand problem solving using computers.</p> <p>CO6: To design an algorithmic solution for a given problem.</p>
	<p>PSO1: Understand basics of Software</p> <p>PSO2: Analyze Software system</p> <p>PSO3: Develop software programs in the areas related to system software</p> <p>PSO4: Develop software programs in the areas related to multimedia</p> <p>PSO5: Develop software programs in the areas related to web designing</p> <p>PSO6: Handle application program like databases, graphics</p> <p>PSO7: Develop networking for efficient design of technology of varying reduce complexity</p>	Digital Electronics (CSO2)	<p>CO1: To familiarize with basic concepts of digital electronics.</p> <p>CO2: To learn number systems and their representation.</p> <p>CO3: To understand the basic logic gates, Boolean algebra and K-maps.</p> <p>CO4: To study arithmetic circuits, combinational circuits and sequential circuits.</p> <p>CO5: Study comparative aspects of logic families.</p>

		Operating System (CSO4)	<p>CO1: To understand structures, functions and history of operating systems.</p> <p>CO2: To understand designs and issues associated with operating systems.</p> <p>CO3: To understand process management concepts including scheduling, synchronization, and deadlocks.</p>
			<p>CO4: To familiarize learners with multi-threading.</p> <p>CO5: To study master concepts of memory management including virtual memory.</p> <p>CO6: To understand master system resources sharing among the users.</p> <p>CO7: To understand issues related with system interface, implementation, disk management.</p> <p>CO8: To familiarize with protection and security mechanisms.</p>
		Programming in C (CSO5)	<p>CO1: To understand a programming language.</p> <p>CO2: To apply problem solving techniques.</p> <p>CO3: To enable learners to write programs in C-programming and to solve problems.</p> <p>CO4: To read, understand and trace the execution of programs written in C language.</p> <p>CO5: to write the C code for a given algorithm.</p> <p>CO6: To implement programs with arrays and functions.</p>
		Advance C-Programming(CS07)	<p>CO1: To create user defined functions for specific task in C language.</p> <p>CO2: To understand the functions, types and working in C programming.</p> <p>CO3: To understand use of user defined data types such as structures & unions. CO4: Students will be able to deal with memory using pointers.</p> <p>CO5: To understand library functions and storage classes in C language.</p> <p>CO6: To learn pre-processor directives and operators in C language.</p> <p>CO7: To study files stored on computer memory using file handling.</p>

		Data Structure (CS08)	<p>CO1: Student will be able to choose appropriate data structure as applied to specified problem definition.</p>
			<p>CO2: Student will be able to handle operations like searching, insertion, deletion and traversing mechanism on various data structures.</p> <p>CO3: Students will be able to apply concepts learned in various domains like DBMS, compiler construction etc. CO4: Students will be able to use linear and non-linear data structures like stacks, queues, linked list etc.</p>
		Programming in CPP (CS011)	<p>CO1: To understand basic object oriented concepts & issues involved in effective class design.</p> <p>CO2: To write C++ programs involving the use object oriented concepts such as information hiding, constructors, destructors, inheritance etc.</p>
		DBMS Using SQL (CS012)	<p>CO1: Understanding the database system basic concepts, architecture, features, purpose, and advantage of DBMS.</p> <p>CO2: Learning about the component of a DBMS: Users, facilities & structure. CO3: Learning about data modeling & design.</p> <p>CO4: Learning about entity-relationship and data model.</p> <p>CO5: Understanding the basics of relational model, normalization, relational algebra.</p> <p>CO6: Introduction to oracle.</p> <p>CO7: Student will able to deal with database system using SQL to manipulate data. CO8: Understanding of physical storage of data.</p> <p>CO9: Learning architecture of database system.</p> <p>CO10: Learning about transaction processing and concurrency control.</p>

		Software Engineering (CSO15)	<p>CO1: To manage selection and initiation of individual projects and of portfolios of projects in enterprise.</p> <p>CO2: To conduct project planning activities that accurately forecast project costs, timelines, and quality.</p>
			<p>CO3: To implement processes for successful resource, communication, risk and change management.</p> <p>CO4: To demonstrate effective project execution and control techniques that result in successful projects.</p> <p>CO5: To conduct project closure activities and obtain formal project acceptance.</p> <p>CO6: To demonstrate a strong working knowledge of ethics and professional responsibility.</p> <p>CO7: To demonstrate effective organizational leadership and change skills for managing projects, project teams, and stakeholders.</p>
		VB .Net: (CSO16)	<p>CO1: To understand the structure and model of programming language VB .Net</p> <p>CO2: To use the programming language VB.Net for programming technologies.</p> <p>CO3: To develop software in VB .Net.</p> <p>CO4: To evaluate user requirements for software functionality required to decide whether the programming language VB .Net can meet user requirements.</p> <p>CO5: To solve the given problem by applying technologies using implementation of VB.Net programming language.</p> <p>CO6: To choose an engineering approach for solving problems, starting from acquired knowledge of programming and operating systems.</p>

		Data Communication and Networking(CSO 19)	<p>CO1: Understand types of networks, technologies and application of networks. CO2: Understand types of addresses and data communication.</p> <p>CO3: Understand the concept of networking models, protocols and functionality of each layer.</p> <p>CO4: Learn basic networking hardware and tools.</p>
			<p>CO5: Understand wired and wireless networks, its types, functionality of layer.</p>
		Ethics and Cyber Law (CSO20)	<p>CO1: To describe laws governing cyberspace and analyze the role of internet governance in framing policies for internet security.</p> <p>CO2: To discuss different types of cybercrimes and analyze legal frameworks of different countries to deal with these cybercrimes.</p> <p>CO3: To explain the importance of jurisdictional boundaries and identify the measures to overcome cross jurisdictional cyber-crimes.</p> <p>CO4: To illustrate the importance of ethics in legal profession and determine the appropriate ethical and legal behavior according to legal frameworks.</p> <p>CO5: To identify intellectual property right issues in cyberspace and design strategies to protect intellectual property.</p> <p>CO6: To assess legal issues with online trading, analyze applicable contracting and taxation regulations.</p> <p>CO7: To create security policy to comply with laws governing privacy and develop policies to ensure secure communication.</p>

Programme	Programme Specific Outcomes	Course	Course Outcomes
<p>M. Sc. Computer Science</p>	<p>PSO01: Students can utilize and implement hardware and software technologies that provide computing solutions to address the needs of an organization.</p> <p>PSO02: Student can identify various needs within organization and provide solutions by using computing technologies</p> <p>PSO03: Student can apply basic cultural, social, legal, and ethical practices inherent in the discipline of computing.</p> <p>PSO04: Students understand, analyze and develop computer programs into algorithms, system software, compiler design, data mining, mobile computing and networking for efficient design of computer based systems of varying complexity.</p> <p>PSO05: Students can understand the principles of programming for applying in a broad range of languages and open source platforms.</p> <p>PSO06: Students can improve ability of imparting knowledge in real world problems with modern technological tools</p>	<p>Advanced Java(CSC401)</p>	<p>CO1: Explain the concept of programming fundamentals</p> <p>CO2: Explain problem analysis: Explain, formulate, review research literature, and analyze computer Programming problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and Programming sciences</p> <p>CO3: Describe ethical principles and commit Explain professional</p>
			<p>ethics and responsibilities and norms of the Programming practice</p> <p>CO4: Explain Logic and Algorithm principle, Describe model, design and implement software projects meet to business objectives</p> <p>CO5: Describe Modern Tool usage: Create, select, and apply appropriate techniques, resources, and modern Programming and IT tools including prediction and modelling tools complex Programming activities with an understanding of the limitations</p>

		<p>Neural Network (CSC402)</p>	<p>CO1: Explain how the neural networks provided significantly better results than the regression model in terms of variation and prediction of extreme outcomes</p> <p>CO2: Explain how neural network computation continues Explain gain popularity as an information processing Tool and has been applied Explain several problems in medical decision-making that traditionally have been attacked using statistical methods</p> <p>CO3: Describe that how the neural networks are also self-training and amenable and explain incremental training after being put in to use. On the negative side, neural networks operate as “black boxes” in that they fail Explain elucidate any “deep” knowledge about the process being modelled</p> <p>CO4: Explain mathematical preliminaries</p> <p>CO5: Describe the artificial neurons abstraction field of Computer Science</p>

		Digital Signal Processing (CSC403)	<p>Upon completion of the course, the students will be able to -</p> <p>CO1: Explain the signals and systems (SOA)</p> <p>CO2: Describe the principles of discrete-time signal analysis Explain perform various signal operations (SO A, E)</p> <p>CO3: Describe the principles of z-transforms and explain finite difference equations. (SO A, E)</p> <p>CO4: Describe the principles of Fourier transform analysis, Explain the frequency characteristics of discrete-time signals and systems (SO A, E)</p> <p>CO5: Explain the principles of signal analysis and explain filtering (SO A, C, E)</p>
		Advanced Operating System (CSC404)	<p>CO1: Explain Linux kernel mode with user mode and differentiate Kernel structuring methods</p> <p>CO2: Explain file system structure with device drivers and file operations using system calls</p> <p>CO3: Process management and Thread management strategies</p> <p>CO4: Construct shell scripts with different programming syntax</p> <p>CO5: Prepare for various OS case studies</p>

		Data Structure & Analysis of Algorithms (CSC405)	<p>CO1: Explain the asymptotic performance of algorithms</p> <p>CO2: Describe rigorous correctness proofs for algorithms</p> <p>CO3: Explain a familiarity with major algorithms and data structures</p> <p>CO4: Describe important algorithmic design paradigms and methods of analysis</p> <p>CO5: Describe efficient algorithms in common engineering design situations</p>
		Advance Neural Network & Fuzzy Systems (CSC406)	<p>CO1: Describe soft computing concepts and techniques and foster their abilities in designing and implementing soft computing based solutions for real-world and engineering problems.</p> <p>CO2: Explain fuzzy systems, fuzzy logic and its applications Explain the students about Artificial Neural Networks and various categories of ANN</p> <p>CO3: Describe fuzzy systems, fuzzy logic and its applications, Artificial Neural Networks and various categories of AFNN</p>
		Image Processing (CSC407)	<p>CO1: Describe Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline</p> <p>CO2: Explain In-depth understanding of specialist bodies of knowledge within the engineering discipline</p> <p>CO3: Describe the knowledge development and research directions within the engineering discipline</p>

			<p>CO4: Describe Application of established engineering methods Explain complex engineering problem solving</p> <p>CO5: Explain fluent application of engineering techniques, Tools and resources.</p> <p>CO6: Describe Application of systematic engineering synthesis and design processes</p>
		<p>Parallel Computing (CSC408)</p>	<p>CO1: Describe foundation of mathematics, computer science and problem solving methodology for effective implementation in the area of software development</p> <p>CO2: Explain knowledge about various sub-domains related Explain the field of computer science and applications</p> <p>CO3: Describe about principles of system analysis, design, development and project management</p> <p>CO4: Explain effective communication skills combined with professional & ethical attitude</p>
		<p>Java Network Programming (CSC501)</p>	<p>CO1: Describe the concept of programming with mathematics</p> <p>CO2: Describe problem analysis: Explain, formulate, review research literature, and analyze computer Programming problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and Programming sciences</p> <p>CO3: Describe ethical principles and commit Explain professional ethics and responsibilities and norms of the Programming practice</p> <p>CO4: Describe Logic and Algorithm principles, explain model, design and implement software projects Explain meet customers' business objectives</p>

			<p>CO5: Describe Modern Tool usage: Create, select, and apply appropriate techniques, resources, and modern Programming and IT Tools including prediction and modelling Explain complex Programming activities with an understanding of the limitations.</p>
		<p>Advanced Software Engineering & Technology (CSC502)</p>	<p>CO1: Describe ethics, professionalism, and cultural diversity in the work environment.</p> <p>CO2: Explain basic software quality assurance practices Explain ensure that software designs, development, and maintenance meet or exceed applicable standards</p> <p>CO3: Describe effective written and oral communication skills. Graduates can prepare and publish the necessary documents required throughout the project lifecycle</p> <p>CO4: Describe effectively contribute Explain project discussions, presentations, and reviews. CO5: Explain the need for lifelong learning and can readily adapt and explain new software engineering environments</p>
		<p>Computer Vision (CSC503)</p>	<p>CO1: Describe theory of computer vision</p> <p>CO2: Describe the basics of pattern recognition concepts with applications Explain computer vision</p> <p>CO3: Describe necessary theory and skills for automatic analysis of digital images, and thereby to construct representations of physical objects and scenes, and Explain make useful decisions based on them</p>

			<p>CO4: Explain the ability to evaluate the computing systems from viewpoint of quality, security, privacy, cost effectiveness, utility and ethics</p> <p>CO5: Describe inculcate lifelong learning by introducing principles of group dynamics, public policies, environmental and societal context</p> <p>CO6: Describe Recite algorithms that employ randomization. Explain the difference between a randomized algorithm and an algorithm with probabilistic inputs</p>
		<p>Mobile computing (CSC429)</p>	<p>CO1: Explain Data kernel mode with user mode and differentiate Kernel structuring methods</p> <p>CO2: Explain internal file data system structure with device drivers and file operations using system calls</p> <p>CO3: Explain Process of data warehousing and Thread management strategies</p> <p>CO4: Describe Construct shell warehousing with different programming syntax</p> <p>CO5: Explain the various Data Ware Housing case studies</p>
		<p>Pattern Recognition (CSC505)</p>	<p>CO1: Describe learn Restoration Process, Noise Models, and Restoration in Presence of Noise</p> <p>CO2: Explain learn Periodic Noise Reduction by Frequency Domain Filtering</p> <p>CO3: Describe study estimating the Degradation Function,</p> <p>CO4: Explain learn Degradation model Algebraic Approach Explain Restoration</p>

			<p>CO5: Describe give basics of pattern recognition concepts with applications Explain computer vision</p> <p>CO6: Describe necessary theory and skills for automatic analysis of digital images, and thereby to construct representations of physical objects and scenes, and Explain make useful decisions based on them</p>
		<p>Computer Vision (CSC506)</p>	<p>CO1: Describe the fundamentals of Cryptography</p> <p>CO2: Describe knowledge on standard algorithms used Explain provide confidentiality, integrity and authenticity</p> <p>CO3: Explain key distribution and management schemes</p> <p>CO4: Describe encryption techniques Explain secure data in transit across data networks</p> <p>CO5: Explain design security applications in the field of Information technology Graduates use effective communication skills and technical skills and explain assure production of quality software, on time and within budget.</p> <p>CO6: Describe knowledge of science, mathematics, and engineering and explain take on more expansive tasks that require an increased level of self-reliance, technical expertise, and leadership</p> <p>CO7: Explain the computing systems from view point of quality, security, privacy, cost effectiveness, utility and ethics</p>

Programme	Programme Specific Outcomes	Course	Course Outcomes
M.Sc. Mathematics	<p>PSO1: Acquire advanced knowledge in Mathematics</p> <p>PSO2: Able to solve complex mathematical problems effectively</p> <p>PSO3: Equip knowledge in various concepts involved in Algebra, Real analysis, Complex analysis, discrete Mathematics, Mechanics, Functional analysis and Difference equations</p>	Advanced Abstract Algebra- I	<p>CO1: Describe binary relation, binary operation, group, subgroup, cyclic group</p> <p>CO2: Describe Lagrange's theorem, Fermat's and Euler's Theorem</p> <p>CO3: Explain in detail Normal subgroup, quotient group, fundamental theorem of group homomorphism, automorphism</p> <p>CO4: Explain permutation group, centre, Normaliser, derived group, Cayles Theorem, Describe Normal series, solvable and Nilpotent group, alternating group</p> <p>CO5: State Fundamental theorem of finitely generated abelian group, Sylow theorems and applications</p>
	<p>PSO4: Acquire a breadth and depth of understanding of advances in Mathematics</p> <p>PSO5: Able to solve differential and difference equations</p>	Real Analysis-I	<p>CO1: Explain Riemann Stieltjes integrals and its properties</p> <p>CO2: Describe sequence and series of functions and learn their tests for Convergence</p> <p>CO3: State Weierstrass theorem, Abel's and Taylor's Theorem</p> <p>CO4: Explain functions of several variables, chain rule</p> <p>CO5: Describe inverse function theorem, implicit function theorem</p>

	<p>PSO6: Acquire the knowledge of stereographic projections in complex analysis</p>	<p>Topology-I</p>	<p>CO1: Explain countable, uncountable sets, principle of induction, metric spaces, open sets, closed sets CO2: Describe Closure of a set, interior of a set and their properties CO3: Describe bases and subbases, product space, weak topology CO4: Describe evaluation map and related results CO5: Describe directed sets, net, cluster point, subnet, ultranet, filter</p>
		<p>Complex Analysis-I</p>	<p>CO1: Describe complex number system CO2: Describe metric spaces, connectedness, compactness, uniform Convergence CO3: Explain elementary properties of exponential function, trigonometric and hyperbolic functions, roots of unity, Cauchy-Riemann equations, harmonic functions CO4: Explain analytic functions as a mapping, Mobius transformations, bilinear transformation CO5: Define the index of a closed curve, Cauchy's theorem, Gauss's theorem, singularities</p>
		<p>Differential Equations-I</p>	<p>CO1: Apply method of successive approximations for first order linear differential equations, explain and apply Lipschitz condition and Peano's theorem. CO2: Analyze and explain existence of solutions and use of differential inequality CO3: Apply and describe integral inequalities CO4: Analyze existence of solutions of linear systems CO5: Describe and apply adjoint system, periodic system and in-homogeneous systems.</p>

		Advanced Abstract Algebra- II	<p>CO1: Describe Ring, Ideals and their properties</p> <p>CO2: Define Vector spaces, Linear dependence and independence, Basis and Modules</p> <p>CO3: Explain linear transformation, characteristic roots and triangular form</p> <p>CO4: Describe Extension field, irreducible polynomial and finite fields</p> <p>CO5: Describe automorphism of group, Galois Theory, polynomial solvable by radicals</p>
		Real Analysis-II	<p>CO1: Explain measure, measurable sets, Borel and Lebesgue measurability</p> <p>CO2: Explain integration of functions of real variable and Integration of series</p> <p>CO3: Describe Riemann and Lebesgue integral and functions of bounded variations</p> <p>CO4: Describe abstract measure spaces and integration with respect to a Measure</p> <p>CO5: Explain LP spaces, convex functions, Jensen's inequality and almost uniform convergence</p>
		Topology-II	<p>CO1: Describe Separation axioms, T₀, T₁, T₂ spaces, their properties and characterizations</p> <p>CO2: Define Normal spaces, T₄ spaces, Urysohn's lemma, second countable spaces and Lindelof spaces</p> <p>CO3: Define compactness, sequentially and countably compact spaces</p> <p>CO4: Describe Lebesgue covering lemma, Urysohn's metrization theorem and metrizability of T₀ spaces</p> <p>CO5: Explain connected spaces, components, simple chain, path wise and Locally connected</p>

		Complex Analysis- II	<p>CO1: Explain compactness and convergence in the space of Analytic functions, Factorization of the sine function, the gamma function</p> <p>CO2: Describe Harmonic functions, basic properties of harmonic function, Poisson integral formula</p> <p>CO3: Describe entire functions, Jensen's formulae, the genus and Order of an entire function, Weierstrass Factorization theorem</p> <p>CO4: Describe Univalent function</p> <p>CO5: Explain Analytic continuation, special functions</p>
		Differential Equations-II	<p>CO1: Explain basic ideas of Lagrange's identity, transformation</p> <p>CO2: Describe and apply maximum principle to different types of problems</p> <p>CO3: Explain and apply comparison theorems</p> <p>CO4: Describe eigen values and eigen functions</p> <p>CO5: Describe non-oscillatory systems.</p>
		Functional Analysis	<p>CO1: Explain normed linear space, Banach spaces and Examples</p> <p>CO2: Describe bounded linear transformations, Hahn-Banach Theorem, Reflexive spaces</p> <p>CO3: Explain open mapping theorem, closed graph theorem, inner product Spaces</p> <p>CO4: Describe Hilbert spaces and its properties, Bessel's inequality, Parseval's Identity</p> <p>CO5: Explain self Adjoint operator, eigen values and eigenspaces, finite dimensional spectral theorem</p>

		Partial differential equation	<p>CO1: Give classification of second order partial differential equation, Laplace Equations and Poisson's equation</p> <p>CO2: Describe harmonic functions, Green's function, Energy method and uniqueness</p> <p>CO3: Explain fundamental solution of heat equation, Initial value problem, Mean value formula</p> <p>CO4: Describe non-linear first order complete integral</p> <p>CO5: Explain transformation method, Fourier transform and Laplace transform, arabolic partial differential equation with quadratic number linearity, Burger's equation with viscosity</p>
		Numerical Analysis	<p>CO1: Determine solution of algebraic and transcendentalequation by various methods</p> <p>CO2: Determine solution of system of linear equation by Gauss Elimination method, iteration method, Gauss Seidal method, SOR method</p> <p>CO3: Explain finite differences, Lagranges and Newtoninterpolation, piecewise and spleen interpolation</p> <p>CO4: Explain differentiation and integration</p> <p>CO5: Determine solution of ordinary differential equationby Taylor's series, Picard method, Euler method, Runge- Kutta method</p>

		Lattice Theory	<p>CO1: Describe partially order set, lattice as a poset, lattice as algebra, Hasse Diagram, Meet and join tables</p> <p>CO2: Describe Isotone maps, sublattices, ideals, complete lattice and their Properties</p> <p>CO3: Describe distributive and modular lattice, Demorgan's identities, Boolean algebra, De Morgan's modularity criterion</p> <p>CO4: Describe Stone theorem, distributive lattices with pseudo Complementation</p> <p>CO5: Define join infinite distributive identity, distributive Standard and neutral elements</p>
		Operations Research-I	<p>CO1: Explain basics of LPP</p> <p>CO2: Describe and apply graphical and simplex method to find solution of LPP</p> <p>CO3: Describe duality problem and dual simplex method</p> <p>CO4: Explain transportation and assignment problem and apply methods to solve it.</p> <p>CO5: Write a project report</p>

		Linear Integral Equations	<p>CO1: Describe linear integral equations types of linear integral equations, Symmetrical kernel</p> <p>CO2: Find solution of linear integral equations, verification of solution of Linear integral equations</p> <p>CO3: Describe the differential method of finding the solution of Fredholm Integral equation and Volterra integral equations</p> <p>CO4: Describe symmetric kernel, trace of kernel, Hilbert –schmidt Theorem</p> <p>CO5: Describe integral transform methods, Fourier transform, applications to Volterra integral equations, Green’s function, approach for ordinary Differential equations</p>
		Mechanics	<p>CO1: Describe D’alemberts principal and Lagrange’s equation of motion</p> <p>CO2: Explain Functional, Euler’s equations and Motivating problems of calculus of variations</p> <p>CO3: Explain the fixed end point problem for n unknown functions and variational problems in parametric form</p> <p>CO4: Describe Hamilton principle and applications of Hamilton’s formulation, Cyclic coordinates, conservation theorem</p> <p>CO5: Describe two dimensional motion of rigid bodies Cayley- Klein parameters and related quantities</p>

		Linear Algebra	<p>CO1: Explain linear dependence and independence, bases and dimensions of vector spaces</p> <p>CO2: Describe and apply linear transformations</p> <p>CO3: Describe isomorphism, and dual spaces etc.</p> <p>CO4: Explain eigen values, eigen vectors and Caley-Hamilton theorem</p> <p>CO5: Explain inner product spaces and canonical forms</p>
		Fuzzy Mathematics	<p>CO1: Describe theory of Fuzzy sets as measure of uncertainty and ambiguity Fuzzy logic.</p> <p>CO2: Describe basic concepts in fuzzy sets, convex fuzzy sets</p> <p>CO3: Give properties of α-cuts, Decomposition theorem, operations on fuzzy sets</p> <p>CO4: Describe fuzzy arithmetic, fuzzy numbers, arithmetic operations on fuzzy numbers</p> <p>CO5: Explain fuzzy relations, fuzzy prepositions and their interpretation in terms of fuzzy sets, fuzzy rules</p>
		Operation Research-II	<p>CO1: Describe and apply dynamic programming to find solution of LPP</p> <p>CO2: Describe and solve nonlinear programming problem</p> <p>CO3: Explain industrial problems using replacement problem</p> <p>CO4: Evaluate shortest path and critical path for a problem</p> <p>CO5: Explain and solve PERT/PM</p>


Programme	Programme Specific Outcomes	Course	Course Outcomes
M.A. Geography		भूरूपशास्त्र	<p>CO१ : पृथ्वीच्या अंतरंगाविषयीची माहिती ज्ञात झाली.</p> <p>CO२ : भूपृष्ठ अंतरंगत भूगर्भिय रचना अवगत झाली.</p> <p>CO३ : बाह्य शक्तीच्या निर्मितीची कारके माहित झाली.</p> <p>CO४ : भूपृष्ठ उतारा विषयीची तंत्र ज्ञात झाले.</p> <p>CO५ : भूपृष्ठ रचनेला अनुसरून मानवि कार्य घडून येते.</p>
		लोकसंख्या भूगोल	<p>CO१ : लोकसंख्या व लोकसंख्येची अंगे ज्ञात झाली.</p> <p>CO२ : विकासाच्या दृष्टीने लोकसंख्या व्याप्ती कशी असावी.</p> <p>CO३ : भारतातील लोकसंख्या समस्या माहिती मिळाली.</p> <p>CO४ : लोकसंख्यावाढ नियंत्रणासाठी उपाययोजना किती गरजेचे आहे ज्ञात झाले.</p> <p>CO५ : लोकसंख्या विषयीच्या संकल्पना वितरणानुसार असतात माहिती झाले.</p>
		Fundamental GIS & GPS	<p>CO१ : सदर संवेदनाव्दारे भौगोलिक माहिती अवगत झाली.</p> <p>CO२ : GIS चा डेटा, मॉडेल आणि प्रक्रियांचे वर्णन करणे.</p> <p>CO३ : GPS साधन आणि त्याचे वैशिष्ट्ये लागू करणे.</p> <p>CO४ : एरियल फोटोग्राफी आणि त्याचे वर्गीकरण वर्णन करण्यासाठी अभ्यास करणे.</p>

		Practical	<p>CO१ : जलप्रवाह प्रणालिचा उतार, छेद व आराखडे माहित झाले.</p> <p>CO२ : लोकसंख्या घटक प्रत्यालेखाद्वारे दाखवण्याचे तंत्र अवगत झाले.</p> <ol style="list-style-type: none"> १. अवकाशातून घेतलेल्या छायाचित्राचे अभ्यास, प्रमाण विमानाची उंची त्याची उपयोगता समजली. २. भौगोलिक माहिती प्रणालीद्वारे माहिती स्रोत, समोच्च रेषा, नकाशा व पृथ्वीचा नकाशा काढता आला. ३. GPS उपकरणे स्थान निश्चित व प्रदेशाची उंची माहित झाली.
		हवामानशास्त्र	<p>CO१ : हवामान शास्त्राची तोंड ओळख झाली.</p> <p>Co२ : पृथ्वीच्या वतावरणाची माहिती प्राप्त झाली.</p> <p>CO३ : तापमान व दाब, आर्द्रता इत्यादी विषयाचे माहिती अवगत झाली.</p> <p>Co४ : वायुराशी कशी निर्माण होते. याची माहिती मिळाली.</p> <p>Co५ : हवामानाचे वर्गिकरण तज्ञाच्या प्रतिमानाचे माहिती मिळाले.</p>
		मराठवाड्याचा भूगोल	<p>CO१ : महाराष्ट्रातील स्थान व प्रशासकीय विभाग समजले.</p> <p>CO२ : हवामानाची वैशिष्ट्ये प्रगत करून घेतली.</p> <p>CO३ : साधन संपत्तीचा प्रदेशिक विकासावरील प्रभाव समजण्यात सोपे झाले.</p> <p>CO४ : मराठवाड्यातील कृषि विकासाची माहिती अवगत झाली.</p>
		पर्यटन भूगोल	<p>CO१ : पर्यटणाच्या संकल्पना महत्वपूर्ण असतात.</p> <p>CO२ : भारतातील पर्यटणाचे वर्गिकरण समजले.</p>


			<p>CO३ : पर्यटन रोगाची परिक्षण करण्यात आले.</p> <p>CO४ : पर्यटनाच्या समस्या आणि उपाय योजना ज्ञात होत गेल्या</p> <p>CO५ : प्राकृतिक व मानवी पर्यावरणावर पर्यावरणाचा प्रभाव कसा पडतो वर्णन झाले.</p>
		Practical	<p>CO१ : जमिनीच्या सच्छिद्रतेचा अंदाज करणे.</p> <p>CO२ : मातीत २.५ माती पाणी टेस्ट करून मातीचा PH काढणे.</p> <p>CO३ : मातीचे वेगवेगळे उद्देश आणि मुलभूत माप दंड त्याच्या चाचणीच्या पध्दती अभ्यासणे मातीची EC मोजण्यासाठी २.५ PH चा वापर करणे.</p>
		सागरशास्त्र	<p>CO१ : समुद्रशास्त्रातील प्रमुख संकल्पना परिभाषित करणे.</p> <p>CO२ : सागरी तळाचे वर्णन करण्यासाठी अभ्यास करणे.</p> <p>CO३ : समुद्राच्या पाण्याचा गुणधर्माचा अर्थ लावणे</p> <p>CO४ : सागरी प्रदेशातील लाटांचे परिक्षण करणे.</p> <p>CO५ : भरती-ओहोटीचे मुल्यांकन करणे.</p>
		लोकसंख्या	<p>CO१ : लोकसंख्या शास्त्राचा मुलभूत संकल्पनांचे विश्लेषण</p> <p>CO२ : लोकसंख्या शास्त्रीय संक्रमणाच्या वैशिष्ट्याचे वर्णन करणे.</p> <p>CO३ : लोकसंख्याशास्त्रीय डेटाच्या स्रोतांचे वर्गिकरण करा.</p> <p>CO४ : वय लिंग संरचना आणि त्याच्या गतिशिलतेचा अर्थ लावा.</p>

		समाजिक आणि सांस्कृतिक भूगोल	<p>CO१ : सामाजिक आणि सांस्कृतिक भूगोलाच्या मुलभूत संकल्पनांचे विश्लेषण करणे.</p> <p>CO२ : सामाजिक सांस्कृतिक सेटअप आणि क्षेत्राचे वर्णन करणे.</p> <p>CO३ : सामाजिक आणि सांस्कृतिक वैशिष्ट्यांच्या प्रादेशिक भिन्नतेचे वर्णन करणे.</p> <p>CO४ :सामाजिक आणि सांस्कृतिक समस्यांचा अर्थ लावणे.</p>
		Practical	<p>CO१ : दिलेल्या नदीचे अनुदैर्घ्य प्रोफाइल काढणे.</p> <p>CO२ :मैदाणि प्रदेशाचे SOI टोपोशिट वाचणे.</p> <p>CO३ : वनस्पतीच्या संदर्भात SOI टोपोशिटचा अर्थ लावणे.</p>
		भौगोलिक विचारवंत	<p>CO१ :भौगोलिक विचारांची व्याख्या करणे.</p> <p>CO२ : आधुनिक भूगोलशास्त्रांच्या योगदानाचे वर्णन करणे.</p> <p>CO३ :भूगोलातील उपमा आणि तत्वज्ञान करणे.</p> <p>CO४ :भूगोलातील कायदे आणि सिध्दांत एकत्र करणे.</p>
		शहरी भूगोल	<p>CO१ : शहरी भूगोलाच्या मूलभूत संकल्पनांची व्याख्या करणे.</p> <p>CO२ : शहरी वर्गीकरणाबद्दल चर्चा करणे.</p> <p>CO३ : ग्रामीण शहरी सीमांचे परिक्षण करणे.</p> <p>CO४ :मध्यवार्ते ठिकाणी आणि शहरी पदानुक्रमे तपासणे.</p>

		ग्रामीण भूगोल	<p>CO१ : ग्रामीण भूगोलाच्या मुलभूत संकल्पनाची व्याख्या करणे.</p> <p>CO२ : ग्रामीण वस्तीचे प्रकार आणि नमुण्याचे वर्णन करणे.</p> <p>CO३ : ग्रामीण भुदृष्य आणि वसाहतीचे परिक्षण करणे.</p> <p>CO४ : ग्रामीण मध्यवर्ती ठिकाणांची तपासणी करणे.</p>
		Research Methodology	<p>CO१ : भूगोलातील संशोधन पध्दतीच्या मुलभूत संकल्पनाचे विश्लेषण करणे</p> <p>CO२ : भूगोलातील संशोधनाच्या उद्देशाचे वर्णन करणे.</p> <p>CO३ : भूगोलातील संशोधन पध्दती लागू करणे.</p> <p>CO४ : भूगोल मध्ये संशोधन प्रक्रिया व्याख्या अभ्यासणे.</p>
		Practical	<p>CO१ : भूगोलातील संशोधनात्मक गंध्यांचा अर्थ लावणे</p> <p>CO२ : संशोधनाचे उद्देशाचे वर्णन करणे</p>


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