Shivshakti Education Society, Kotha (Veni)

Shivshakti Arts and Commerce College

Babhulgaon. Dist. Yavatmal.

Course Outcomes

(2021-22)

Class and Sem	Course name/ Subject Name	Course Outcome	Program Outcome	Program specific Outcome
B.Com I Sem. 1st	English Compulsory	Understand the contents of prescribed lessons and poems.	Communication: Communicate effectively using English language	Understand significance of English language.
		Write answers of the questions based on prescribed lessons and poems.	Ethics: Apply ethical principles in life learnt from prescribed lessons and poems.	Comprehend ethical values/information in the prescribed lessons and poems.
		Comprehend the use of tense forms.	Critical Thinking: Take actions after identifying the accuracy of assumptions.	Analyze the use of grammar in day to day English communication.
		Identify synonyms and antonyms of the words.	Writing Skill: Apply writing skill learnt during the course.	Differentiate various forms of written communication.
		Use articles in the sentences.		
		Change the narration of the sentences.		
		Write formal / Informal letters and resume.		
B.Com I Sem. 2nd	English Compulsory	Understand the contents of prescribed lessons and poems.	Communication: Communicate effectively using English language	Understand significance of English language.
		Write answers of the questions based on prescribed lessons and poems.	Ethics: Apply ethical principles in life learnt from prescribed lessons and poems.	Comprehend ethical values/information in the prescribed lessons and poems.
		Use idioms, phrases and prepositions in the sentences.	Critical Thinking: Take actions after identifying the accuracy of assumptions.	Analyze the use of grammar in day to day English communication.
		Change the voice of the sentences.	Writing Skill: Apply writing skill learnt during the course.	Differentiate various forms of written communication.
		Write one word for a group of words.		
		Write e-mails and newspaper reports.		
B.Sc. I Sem. 1st	English Compulsory	Understand the contents of prescribed lessons and poems.	Communication: Communicate effectively using English language	Understand significance of English language.
		Write answers of the questions based on prescribed lessons and poems.	Ethics: Apply ethical principles in life learnt from prescribed lessons and poems.	Comprehend ethical values/information in the prescribed lessons and poems.
		Comprehend parts of speech in English.	Critical Thinking: Take actions after identifying the accuracy of assumptions.	Analyze the use of grammar in day to day English communication.
		Use articles and prepositions in the sentences.	Writing Skill: Apply writing skill learnt during the course.	Differentiate various forms of written communication.
		Comprehend the use of tense forms.		
		Understand transformation of sentences.		
		Write curriculum vitae, applications, business letters, formal letters and dialogue.		
B.Sc. I Sem. 2nd	English Compulsory	Understand the contents of prescribed lessons and poems.	Communication: Communicate effectively using English language	Understand significance of English language.
		Write answers of the questions based on prescribed lessons and poems.	Ethics: Apply ethical principles in life learnt from prescribed lessons and poems.	Comprehend ethical values/information in the prescribed lessons and poems.
		Comprehend parts of speech in English.	Critical Thinking: Take actions after identifying the accuracy of assumptions.	Analyze the use of grammar in day to day English communication.
		Use articles and prepositions in the sentences.	Writing Skill: Apply writing skill learnt during the course.	Differentiate various forms of written communication.
		Comprehend the use of tense forms.		
		Understand transformation of sentences.		
		Write dialogue, report and paragraph.		
B.A. II Annual Pattern	English Compulsory	Understand the contents of prescribed lessons and poems.	Communication: Communicate effectively using English language	Understand significance of English language.
		Write answers of the questions based on prescribed lessons and poems.	Ethics: Apply ethical principles in life learnt from prescribed lessons and poems.	Comprehend ethical values/information in the prescribed lessons and poems.
		Classify countable and uncountable nouns.	Critical Thinking: Take actions after identifying the accuracy of assumptions.	Analyze the use of grammar in day to day English communication.
		Use articles and prepositions in the sentences.		
		Identify relative clauses.		
		Use adjectives and adverbs in the sentences.		
		Comprehend and use prescribed conjunctions.		
B.A. III Annual Pattern	English Literature	Understand the contents of prescribed poems, novel and drams.	Communication: Communicate effectively using English language	Understand significance of English language.
		Write answers of the questions based on prescribed poems, novel and drama.	Ethics: Apply ethical principles in life learnt from prescribed lessons and poems.	Comprehend ethical values/information in the prescribed lessons and poems.
		Differentiate poem, novel and drama.	Critical Thinking: Take actions after identifying the accuracy of assumptions.	Analyze the use of grammar in day to day English communication.
		Understand various forms of Shakespearian drama.		
		Comprehend prescribed literary terms.		
B.A III	English Compulsory	Understand the contents of prescribed lessons and poems.	Communication: Communicate effectively using English language	Knowledge-Collect information about English Grammar.
(Annual Pattern)		Write answers of the questions based on prescribed lessons and poems.	Ethics: Apply ethical principles in life learnt from prescribed lessons and poems.	Understand significance of English language.
		Write e-mails,fax and newspaper reports.	Critical Thinking: Take actions after identifying the accuracy of assumptions.	Application - Utilize the Knowledge in day to life.
		Write C.V.	Writing Skill: Apply writing skill learnt during the course.	Skill-Students acquire the skill of using English in day today life
		Write Notices ,Agendas, Minutes of the meeting.		
B.Com II	English Compulsory	Understand the contents of prescribed lessons and poems.	Communication: Communicate effectively using English language	Knowledge-Collect information about English Grammar .
Annual Pattern		Write answers of the questions based on prescribed lessons and poems.	Ethics: Apply ethical principles in life learnt from prescribed lessons and poems.	Understand significance of English language.
		Write dialogue, report and paragraph.	Critical Thinking: Take actions after identifying the accuracy of assumptions.	Application -Utilize the Knowledge in day to life.
			Writing Skill: Apply writing skill learnt during the course.	Skill-Students acquire the skill of using English in day today life
B.Sc. I Sem. I, II	English Compulsory	Understand the contents of prescribed lessons and poems.	Communication: Communicate effectively using English language	Knowledge-Collect information about English Grammar.
		Write answers of the questions based on prescribed lessons and poems.	Ethics: Apply ethical principles in life learnt from prescribed lessons and poems.	Understand significance of English language.
		Comprehend parts of speech in English.	Critical Thinking: Take actions after identifying the accuracy of assumptions.	Application -Utilize the Knowledge in day to life.
		Use articles and prepositions in the sentences.	Writing Skill: Apply writing skill learnt during the course.	Skill-Students acquire the skill of using English in day today life.
		Comprehend the use of tense forms.		
		Understand transformation of sentences.		
		Write curriculum vitae, applications, business letters, formal letters and dialogue.		
B.A.I	English Literature	Understand the contents of prescribed Background,	Communication: Communicate effectively using English language	Knowledge-Collect information about English Writers and their works.
Sem I,II		Poems, one act plays, Literary Theories and terms.	Ethics: Apply ethical principles in life learnt from prescribed lessons and poems.	Understand significance of English literature in human life..
		Write answers of the questions based on prescribed poems,One Act Plays and literary terms	Critical Thinking: Take actions after identifying the accuracy of assumptions.	Application -Utilize the Knowledge in day to life.
				Skill-Students acquire the skill of using English in day today life
B.A. I (Semi-I)	Physical Geography	Understand the effect of rotation and revolution the earth	To know the fundamentals of physical geography,	On completion of the B.A. (Geo) students are able to

		Know the internal structure of the earth know the importants of longitudes and latitudes international dateline and standard time.	Understand latitudes, longitudes, and international deadline	Serve as a Geographer
		Understand interior structure of the Earth	Acquire knowledge about origin of various landforms	Work as a teacher in school and high school.
		Understand theory regarding of origin of continents and oceans	Understand the origin of oceans and currents	Serve as a conservator in forest, Soil, Agriculture, dept.
		Study the formation of rocks understand the work of internal and external forces and their associated land forms.	To understand formation of rocks there types and uses	Work as a disaster and water resources management
Semi-II	Physical Geography	Understand the importants of atmosphere	Understand the work of internal coerces	Serve in forest dept. as forest conservator
		Understand the composition of atmosphere	Acquire knowledge of external forces	Serve in cartographer in map making divisions of govt.
		Know measurement of atmospheric pressure and formation of pressure belts	Study the landforms and process	Work in NGOS
		Understand the types of wind	Study the denudation processes.	Can prepare for competitive exams
BA.-II	Climatology	Understand the structure, composition of atmosphere		On completion of the B.A. (Geo) students are able to
		Understand weather phenomena winds, humidity, precipitation	Introduce the students of top sheet, weather map.	Serve as a Geographer
		Understand the heat balance	Understand the mechanism function of topographical maps.	Work as a teacher in school and high school.
		Understand forecasting methods	Understand interpretation if weather images.	Serve as a conservator in forest, Soil, Agriculture, dept.
		To understanding the process of weather forecasting	Get knowledge about Geo statistical methods.	Work as a disaster and water resources management
		Study of Koppens classification	Students understand the Microsoft Excel, work sheet and learn the basic about the preparation ofgraphs, maps, in software for presentation Techniques	Serve in forest dept. as forest conservator
		To understand climatic changes through dust and carbon die oxide theory.	To evaluate and investigation the population date in Microsoft excel software.	Serve in cartographer in map making divisions of govt.
			Applied and understand thedata analysis techniques for rural and urban settlement and prepare the adequate maps, various graphs.	Work in NGOS
	Oceanography	Understand importance of ocean	Evaluate the Data analysis Techniques in agricultural geography and climatology.	Can prepare for competitive exams
		Knowledge about effect of ocean currents	Understand the various basics statistical Techniques for analysis the geographical data.	
		Understand human impacts on ocean.		
		Study about types of tides.		
		To make aware about jadeites use of water.		
		To understand water shade management and water harvesting structure.		
B.A.-III	Geography of India	Understand the location physiography, Drainage, climate and Vegetation of India		
		To know the silent feature, problems and prospects of Agriculture.		
		Study the problems and prospect of industrial area.		
		Population composition India.		
		Practical geography study of scales, projections and surveying with the helps of plane table		
		Understand the different surviving techniques knowledge about preparation of layout		
		Understand the socio economy condition of the villages.		
		Knowledge of drawing of profile		
B.A. I Sem I	Hiatory of India(Form Early to1206 A.D.)	Students will learn to Early Phase of Indian History,Empairer , culture,politicaltysocio-economical aspect of this Phase	विद्यार्थ्यांमध्ये प्राचीनकाळी ऐतिहासिक घटनांचे ज्ञान होते व तत्कालीन साहित्य, संक्रुती, कला व राजकीय घटनांची माहिती होते.	इतिहास विषयांतर्गत प्राचीन कालीन,सुल्तानशाही कालीन, मोगल कालीन, आधुनिक भारत व आधुनिक युरोप चा इतिहास अभ्यास केल्या जातो. त्यामुळे विध्यार्थ्यांमध्ये भारताचा व आधुनिक युरोपच्या ऐतिहासिक घटनांचे कालीन होते. समाजात जबाबदार नागरीक म्हणुन कार्य करतांना हे ज्ञान उपयोगी पडते. स्पर्धापरीक्षा मध्येही हे विधार्थ्यांना उपयोगी पडते.
B.A.I Sem II	Hiatory of India(Form 1206 to 1526 A.D.)	सुलतानशाही कालीन राजकीय ,सामाजिक ,आर्थिक ,कला जीवनाचा अभ्यास होतो	विध्यार्थ्यांमध्ये सुल्तानशाही कालीन राजकीय,सामाजिक, इतिहासाची माहिती होते	
B.A. II	Hiatory of India(1526 to 1947 A.D.)	आधुनिक भारताचा इतिहासाचा अभ्यास केल्या जातो	आधुनिक भारताच्या इतिहासातील ऐतिहासिक घटनांचे विश्लेषण केल्या जाते	
B.A. III	History of modern Europe (1780 to 1965A.D.)	आधुनिक युरोपचा इतिहासात फ्रेंच राज्यक्रांती ,नेपोलियन बोनापार्ट ,जर्मनी ,इटली ,पहिले महायुद्ध ,दुसरे महायुद्ध ,शीत युद्ध आदि घटनांचा आभास केल्या जातो	आधुनिक युरोपचा इतिहासाचा अभ्यासाने जागतिक घडामोडीचे विश्लेषण करता येते	
B.A. I Sem I	Micro Economics	Students will learn to apply Economic theories and methodologies in analysing Economic issues in various sub field of applied Micro Economics	It develops Economic way of thinking	Through the teaching of Micro Economics , Economy of Maharashtra, Macro Economics , Indian Economy the undergraduate Economics programme help students to establish in depth understanding of the functioning of domestic and global Economies. To develop the understanding regarding functioning of business among the students of rural area and make them capable of establishing their own business or joining the jobs in various sectors like banks, companies, indusrties and any other sectors .
B.A.I Sem II	Economy of Maharashtra	Students know the various issues , problems in Maharashtra Economy and the solutions of these issues and problems.	Students Prepare well for competitive exams. On state level	
B.A. II	Macro Economics	To develop the understanding of Macro Economics issues among the students	Understand the role of Banks in economy. Types and functions of Banks.Recent survices provided by Banks.	
B.A. III	Development & Environmental Economics	Students know the various issues , problems in Indian Economy and they know the remidies of the issues and problems.	Students will learn to apply Economic theories and methodologies in analysing Economic issues in various fields in Indian Economy	
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		• ¤Énù±ÉiªÉÉ EòÉ³ýÉiÉÒ±É Ê´ÉÊ´ÉvÉ ºÉ¨ÉºªÉÉSÉÒ VÉÉhÉÒ´É ½þÉäiÉä.	• ºÉ¨ÉÉVÉÉiÉÒ±É =SSÉ¨ÉÚö±ªÉÉÆSÉÒ +Éä³ýJÉ ½þÉäiÉä.	• ¦ÉÉÊ¹ÉEò EòÉè¶É±ªÉÉSÉÉ ={ÉªÉÉäMÉ Eò®úiÉÉ ªÉäiÉÉä.
		• VÉÒ´ÉxÉ VÉÉMÉhªÉÉSÉÒ Ênù¶ÉÉ Ê¨É³ýiÉä.	• =t¨ÉÊ¶É±É |Éä®úhÉÉ Ê¨É³ýiÉÉiÉ.	• ´ÉèYÉÉÊxÉEò où¹]õÒ Ê´ÉEòºÉÒiÉ ½þÉäiÉä.
		• VÉÒ´ÉxÉÉxÉÖ¦É´ÉÉSªÉÉ ºÉÉénùªÉÉÇSÉÉ +Éº´ÉÉnù PÉäiÉÉ ªÉäiÉÉä.	• ºÉÉ¨ÉÉÊVÉEò, ºÉÉÆºEÞòÊiÉEò BäCªÉ ´É ¤ÉÉÆÊvÉ±ÉEòÒSÉÒ ¦ÉÉ´ÉxÉÉ ÊxÉ¨ÉÉÇhÉ ½þÉäiÉä.	• =tÉäMÉÉºÉÆ¤ÉÆvÉÒ +ÉºlÉÉ ÊxÉ¨ÉÉÇhÉ ½þÉäiÉä.
		• ÊxÉ¤ÉÆvÉÉ¨ÉÖ³äý Eò±{ÉxÉÉ Ê´É±ÉÉºÉ ´É Ê´ÉSÉÉ®ú¶ÉCiÉÒ ´ÉÉføiÉä.	• ºÉ¨ÉÉVÉ¨ÉxÉÉiÉ ´ÉèYÉÉÊxÉEò où¹]õÒEòÉäxÉÉSÉÒ +ÉºlÉÉ ÊxÉ¨ÉÉÇhÉ ½þÉäiÉä.	• ¦ÉÉ¹Éä´É®ú |É¦ÉÖi´É ÊxÉ¨ÉÉÇhÉ ½þÉäiÉä.
		• ºÉÆ´ÉÉnù, ±ÉäJÉxÉ EòÉè¶É±ªÉ |ÉÉ{iÉ Eò®úiÉÉ ªÉäiÉÉiÉ.	• ®úÉ¹]Åõ ´É ºÉ¨ÉÉVÉ ÊxÉÌ¨ÉiÉÒSÉÒ xÉ´ÉÒ ºÉÆ´ÉänùxÉÊ¶É±ÉiÉÉ +ÉÊòÉ®úÉ±ÉÉ ªÉäiÉä.	
B.Com III,	Marathi Compulsory	• =t¨ÉÊ¶É±É |Éä®úhÉÉ Ê¨É³ýiÉÉiÉ.	• ¤ÉÉä±ÉhÉä, BäEòhÉä, Ê±ÉÊ½þhÉä, ´ÉÉSÉhÉä, ªÉÉ EòÉè¶É±ªÉÉÆSÉÉ Ê´ÉEòÉºÉ ½þÉäiÉÉä.	• ºÉÉ¨ÉÉÊVÉEò ´É ®úÉ¹]ÅõÒªÉ BEòiÉäSÉÒ ¦ÉÉ´ÉxÉÉ =i{ÉzÉ ½þÉäiÉä.
Annual Pattern		• ºÉ¨ÉÉVÉÉiÉÒ±É =SSÉ ¨ÉÚö±ªÉÉÆSÉÒ +Éä³ýJÉ ½þÉäiÉä.	• ¨É®úÉ`öÒ ¦ÉÉ¹Éä¨ÉÖ³äý VÉÉMÉÉEòbä÷ ¤ÉPÉhªÉÉSÉÉ où¹]õÒEòÉäxÉ iÉªÉÉ®ú ½þÉäiÉÉä.	• ±ÉÉäEò¶ÉÉ½þÒ ¨ÉÚ±ªÉÉÆSÉä ¨É½þi´É Eò³ýiÉä.
		• ºÉÉ¨ÉÉÊVÉEò, ºÉÉÆºEÞòÊiÉEò BäCªÉ ´É ¤ÉÉÆÊvÉ±ÉEòÒSÉÒ ¦ÉÉ´ÉxÉÉ ´ÉÉføiÉä.	• ºÉ¨ÉÉVÉÉiÉÒ±É =SSÉ¨ÉÚö±ªÉÉÆSÉÒ +Éä³ýJÉ ½þÉäiÉä.	• ¦ÉÉÊ¹ÉEò EòÉè¶É±ªÉÉSÉÉ ={ÉªÉÉäMÉ Eò®úiÉÉ ªÉäiÉÉä.
		• ´ÉèYÉÉÊxÉEò où¹]õÒEòÉäxÉ Ê´ÉEòºÉÒiÉ ½þÉäiÉÉä.	• =t¨ÉÊ¶É±É |Éä®úhÉÉ Ê¨É³ýiÉÉiÉ.	• ´ÉèYÉÉÊxÉEò où¹]õÒ Ê´ÉEòºÉÒiÉ ½þÉäiÉä.
		• xÉ´Éä ®úÉ¹]Åõ ´É ºÉ¨ÉÉVÉÊxÉÌ¨ÉiÉÒ |ÉÊGòªÉäiÉ xÉ´ÉÒ ºÉÆ´ÉänùxÉ¶ÉÒ±ÉiÉÉ +ÉÉòÉ®úÉ±ÉÉ ªÉäiÉä	• ºÉÉ¨ÉÉÊVÉEò, ºÉÉÆºEÞòÊiÉEò BäCªÉ ´É ¤ÉÉÆvÉÒ±ÉÊEòSÉÒ ¦ÉÉ´ÉxÉÉ ÊxÉ¨ÉÉÇhÉ ½þÉäiÉä.	• =tÉäMÉÉºÉÆ¤ÉÆvÉÒ +ÉºlÉÉ ÊxÉ¨ÉÉÇhÉ ½þÉäiÉä.
		• ÊxÉ¤ÉÆvÉÉ¨ÉÖ³äý Eò±{ÉxÉÉ Ê´É±ÉÉºÉ ´É Ê´ÉSÉÉ®ú¶ÉCiÉÒ ´ÉÉføiÉä.	• ºÉ¨ÉÉVÉ¨ÉxÉÉiÉ ´ÉèYÉÉÊxÉEò où¹]õÒEòÉäxÉÉSÉÒ +ÉºlÉÉ ÊxÉ¨ÉÉÇhÉ ½þÉäiÉä.	• ¦ÉÉ¹Éä´É®ú |É¦ÉÖi´É ÊxÉ¨ÉÉÇhÉ ½þÉäiÉä.
		• ºÉÆ´ÉÉnù, MÉÞ½þ{ÉÉ`ö, |É¶xÉÉäkÉ®äú Ê±É½þÒiÉÉ ªÉäiÉÉiÉ.	• ®úÉ¹]Åõ ´É ºÉ¨ÉÉVÉ ÊxÉ¨ÉÔiÉÒSÉÒ xÉ´ÉÒ ºÉÆ´ÉänùxÉÊ¶É±ÉiÉÉ +ÉÊòÉ®úÉ±ÉÉ ªÉäiÉä.	
B.Sc. I,	Marathi Compulsory	• {ÉÉ`öªÉ{ÉÖºiÉEòÉiÉÒ±É +É¶ÉªÉÉxÉä +ÉEò±ÉxÉ IÉ¨ÉiÉÉ ´ÉÉføiÉä.	• ºÉÖºÉÆºEòÉ®úÒiÉ ´É ¨ÉÚ±ªÉÉÊvÉ¹`öÒiÉ VÉ¤ÉÉ¤ÉnùÉ®ú xÉÉMÉÊ®úEò ¤ÉxÉhªÉÉºÉ ¨ÉnùiÉ	• |É¨ÉÉhÉ ¨É®úÉ`öÒ ¦ÉÉ¹ÉäSÉä ´ªÉ´É½þÉ®úÉiÉÒ±É ¨É½þi´É Eò³ýiÉä.
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		• ºÉ¨ÉÉVÉ ºÉÖvÉÉ®úEòÉÆSªÉÉ EòÉªÉÉÇSÉÒ |Éä®úhÉÉ Ê¨É³ýiÉä.	• ºÉÉ¨ÉÉÊVÉEò |É¶xÉÉ Ê´É¹ÉªÉÒ +ÉºlÉÉ ÊxÉ¨ÉÉÇhÉ ½þÉäiÉä.	• +ÉEò±ÉxÉ IÉ¨ÉiÉäSÉÉ Ê´ÉEòÉºÉ ½þÉäiÉÉä.
		• xÉ´ªÉÉ VÉÉhÉÒ´ÉäxÉä ´É xÉ´ªÉÉ Ê´ÉSÉÉ®úÉxÉä ¤ÉÉèÎvnùEò où¹]õÒEòÉäxÉ ºÉ¨ÉÞvnù ½þÉäiÉÉä.	• ÊSÉÉEòÒºÉEò ´É ¤ÉÖvnùÒ|ÉÉ¨ÉÉhªÉ´ÉÉnùÒ ´ÉÞkÉÒ ´ÉÉføiÉä.	• ´ÉèYÉÉÊxÉEò où¹]õÒEòÉäxÉÉxÉä VÉÉMÉÉEòbä÷ {ÉÉ½þiÉÉ ªÉäiÉä.
		• ´ªÉ´É½þÉ®úÉiÉ EòÉªÉÉÇ±ÉªÉÒxÉ {ÉjÉ ´ªÉ´É½þÉ®ú Eò®úiÉÉ ªÉäiÉÉä.		• ´ªÉÉ´É½þÉ®úÒEò VÉÒ´ÉxÉÉiÉ ±ÉäJÉxÉ iÉÆjÉÉSÉÉ ´ÉÉ{É®ú Eò®úiÉÉ ªÉäiÉÉä.
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B.Sc. I,	Marathi Compulsory	• {ÉÉ`öªÉ{ÉÖºiÉEòÉiÉÒ±É +É¶ÉªÉÉxÉä +ÉEò±ÉxÉ IÉ¨ÉiÉÉ ´ÉÉføiÉä.	• ºÉÖºÉÆºEòÉ®úÒiÉ ´É ¨ÉÚ±ªÉÉÊvÉ¹`öÒiÉ VÉ¤ÉÉ¤ÉnùÉ®ú xÉÉMÉÊ®úEò ¤ÉxÉhªÉÉºÉ ¨ÉnùiÉ	• |É¨ÉÉhÉ ¨É®úÉ`öÒ ¦ÉÉ¹ÉäSÉä ´ªÉ´É½þÉ®úÉiÉÒ±É ¨É½þi´É Eò³ýiÉä.
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		• xÉ´ªÉÉ VÉÉhÉÒ´ÉäxÉä ´É xÉ´ªÉÉ Ê´ÉSÉÉ®úÉxÉä ¤ÉÉèÎvnùEò où¹]õÒEòÉäxÉ ºÉ¨ÉÞvnù ½þÉäiÉÉä.	• ÊSÉÉEòÒºÉEò ´É ¤ÉÖvnùÒ|ÉÉ¨ÉÉhªÉ´ÉÉnùÒ ´ÉÞkÉÒ ´ÉÉføiÉä.	• ´ÉèYÉÉÊxÉEò où¹]õÒEòÉäxÉÉxÉä VÉÉMÉÉEòbä÷ {ÉÉ½þiÉÉ ªÉäiÉä.
		• |ÉºÉÉ®ú ¨ÉÉvªÉ¨ÉÉÆºÉÉ`öÒ ±ÉäJÉxÉ Eò®úiÉÉ ªÉäiÉä.		• ´ªÉÉ´É½þÉ®úÒEò VÉÒ´ÉxÉÉiÉ ±ÉäJÉxÉ iÉÆjÉÉSÉÉ ´ÉÉ{É®ú Eò®úiÉÉ ªÉäiÉÉä.
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Sem-I	Political Sceince Indian Constitutional Provisions and Local Self Govt-	विद्याथ्र्यांना राज्यघटनेची वैशिष्टये केद्रसरकार व घटक सरकार यांचे संबंध सघराज्य, अर्थ व ख्याख्या संघराज्य ठळक वैशिष्टये लाकसभा व राज्यसभा रचना, व कार्य निवडणूक आयोग, राजकीय पक्ष, पक्षाला मान्यता देण्याचे निकष, पंचायत राज व्यवस्था आणि पंचायत राज मधील महिलांचा सहभाग या सर्व बाबीची माहिती विद्याथ्र्यांना होते. एकुण भारतीय राजकीय व्यस्थेचे संपूर्ण ज्ञान प्राप्त होते.	राज्यघटना (भारतीची) संघराज्य, लोकसभा, राज्यसभा, निर्वाचन आयोग राजकीय पक्ष, पक्षांचा मान्यता देण्याचे निकष, पंचायत राज व्यवस्था, या सर्व संकल्पनांचा विस्तुत व सखोल अभ्यास विद्याथ्र्यांना होतो. किंबहुना भारतीय राज्यघटनेविषयी संपूर्ण ज्ञान विद्याथ्र्यांना मिळते	भारताच्या राजकीय व्यवस्थेची संपूर्ण माहिती विद्याथ्र्यांना दिल्यामुळे भारताची भावी पिढी सुजान बनण्यास मदत होते. त्यांच प्रमाणे भारतीय युवा पिढी राजकीय व्यवथेबददल जागुत बनते. त्याचप्रमाणे भारतीय संसदेपासून तर ग्रामस्तरावरील ग्रामसभेपर्यंतची संपूर्ण माहिती अथवा ज्ञान मिळते. त्यामुळे युवा पिढी चिरंतनशील बनते व राजकारणाविषयी सतत जागुत राहाते.
Sem-II	Political Sceince Indian Constitutional Provisisions and Local Self Govt-	विद्याथ्र्यांना निवडणूक आयोग व त्याचे कार्य व अधिकार, मुख्यमंत्री, राज्यपाल व त्यांचे कार्य मंत्रीमंडळ, ग्रामीण व शहरी स्थानिक स्वराज्य संस्था नगर परिषद, ग्रामपंचायत व ग्रामसभा तसेच महिलांचा राजकारणातील सहभाग, नागपुर करार, माहिती अधिकार व त्यांचे महत्व या सर्व गोष्टीचे ज्ञान विद्याथ्र्यांना या अभ्यासक्रमाच्या अध्ययनामधून प्राप्त होते.	भारतीतील तरुण युवा पिढीला मतदाना संदर्भात जागुती व्हावी, घटकराज्याचे राज्यपाल, मुख्यमंत्री व स्थानिक पातळी वरील स्थानिक स्वराज्य संस्था, ग्राम–पंचायती ग्रामसभा इत्यादीचे ज्ञान विद्याथ्र्यांना प्राप्त होत. त्याचबरोबर मलांचा राजकारणातील सहभाग, त्यांचा अभ्यास विद्याथ्र्यांना होतो.	भारतातील निवडणूक पध्दत, राज्यपाल, मुख्यमंत्री व त्यांचे कार्य इत्यादी माहिती विद्याथ्र्यांना मिळाल्यामुळे तरुण पिढी राष्टाप्रती जागरुक बनते. एकुणच शहरी व ग्रामीण स्तरावरील प्रशासनाच्या व राजकारणाच्या अध्ययनामुळे विद्यार्थी हे चौकस बुध्दीचे व सुज्ञ बनतात. व राष्ट्रीय कार्यासाठी जागृत असतात
II	Political Sceince Indian (Political-Theory & Political Analysis)	इंग्लडची राजकीय व्यवस्था, अमेरिकन राजकीय व्यवस्था चीन राजकीय व्यवस्था, स्वीस राजकीय व्यवस्था त्याचबरोबर तुलनात्मक राजकारण या सर्व देशातील विविध राजकीय व्यवस्थेचे ज्ञान विद्याथ्र्यांना मिळते	संविधान व संविधानवाद, राजकारणाचा तुलानात्मक अभ्यास, इंग्लड अमेरिकन, चीन, स्वीस इत्यादी देशांच्या राजकीय व्यवस्थेविषयी ज्ञान विद्याथ्र्यांना प्राप्त होते. व विद्यार्थी एका देशांच्या राजकीय व्यवस्थेशी करु शकतो व त्यांना त्याचें ज्ञान मिळते व ज्ञान वुध्दींगत होते.	राजकारणाचा तुलनात्मक अभ्यासक्रम विद्याथ्र्यांना शिकविल्यामुळे विद्यार्थी चौकस बनतात. तुलनात्मक शासन व राजकारण यांच्या माध्यमातून विद्याथ्र्यांना विविध राजकीय व्यवस्थांमधील विविध घटकांची व संकल्पनांची माहिती मिळते व त्यांचे ज्ञान वुध्दींगत होते. विविध देशांच्या राज्यघटनांचा व तेथील व्यवस्थांचा अभ्यास विद्यार्थी करीत असतील तर ते जागुत बनतात. व सकारात्मक दृष्टिकोनातून विचार करणारी पिढी निर्माण होउ शकते.
B.Com I	Advanced Accountancy	उद्योग व व्यापार क्षेत्रातील माहिती गोळा करून व्यापारातील नफा व तोटा काढण्याची क्षमता निर्माण होते.	योग्य माहितीच्या आधारे व्यापारातील फायदे तोटे कश्या मुळे होतात याचे ज्ञान प्राप्त होते.	उद्योग व व्यापार क्षेत्रात नौकरी मिळते किवां व्यापार क्षेत्रात काम करण्याची क्षमता निर्माण होते.
B.com II	Information Technology & Business Data Processing	इंटरनेटच्या वापरामुळे सर्व देश जवळ आले.त्यातुन माहितीची देंवान घेवान करण्यास सोइचे होते.	महिती तत्रंज्ञानाव्दारे देशातील कोणत्याही माहीतीचे ज्ञान प्राप्त होते.	इटंरनेटच्या माघ्यमातुन खरेदी विक्रीचे व्यवहार करू शकते. इटरंनेटच्या ज्ञानामुळे कोणत्याही क्षेत्रात नौकरी मिळु शकते.
B.Com III	Indian Banking System	बॅकीग क्षेत्रातील ज्ञान प्राप्त होते. बॅकीग क्षेत्रातील व्यवहारा संबधीत माहीती प्राप्त होते.	बॅकीगच्या कार्यपध्दतील किंवा बॅकीगच्या कार्या बदल ज्ञान प्राप्त होते.	बॅकींग क्षेत्रात नोकरी मिळते किंवा बॅकीग क्षेत्रात काम करण्याची क्षमता निर्माण होते.

B.Com I	Business Economics	व्यवसाय ज्ञान प्राप्त होते. व्यवसायात महत्तम लाभ कशामुळे प्राप्त होते या विषयी माहीती प्राप्त होते.	व्यवसाय करण्याची क्षमता निर्माण होते.	स्वतंत्र व्यवसाय करु शकतो किंवा व्यावसायीक क्षेत्रात नोकरी करु शकतो.
B.com II	Money Finance System	देशातील मौद्रिक स्थिती काय आहे त्याच प्रमाणे वित्तीय ज्ञान प्राप्त होते	व्यापक असे मौद्रिक ज्ञान प्राप्त होते आणि वित्तीय माहिती मिळते.	मुदेविषयी सखोल ज्ञान प्राप्त होते त्यामुळे व्यावसायीक स्थिरता निर्माण होवून मुद्राबाजार, भांडवल बाजार क्षेत्रात नोकरी किंवा मध्यस्थ म्हणून काम करु शकतो.
B.Com II	Business Mathematics & Statistics	कोणत्याही क्षेत्रातील माहिती गोळाकरुन निष्कर्ष काढण्याची क्षमता निर्माण होते.	योग्य माहितीच्या व निष्कर्षाच्या आधारे व्यावसायीक फायदे तोटे ज्ञान प्राप्त होते	सांख्यिकिंय क्षेत्रात प्राध्यान्यान नोकरी मिळते किंवा स्वतंत्र क्षेत्रात काम करण्याची क्षमता निर्माण होते.
B.Com III	Business Environment	देशातील त्याच प्रमाणे आंतरराष्ट्रीय अर्थव्यवस्थेतील माहिती प्राप्त होते.	राष्ट्रीय आणि आंतरराष्ट्रीय व्यापार क्षेत्रातील माहिती प्राप्त होते.	स्वतंत्र व्यापर क्षेत्रात किंवा सरकारी क्षेत्रात नोकरी करु शकतो..
B.Com I	Principal Of Business Organisation	व्यवसाय ज्ञान प्राप्त होते. व्यवसायात महत्तम लाभ कशामुळे प्राप्त होते या विषयी माहीती प्राप्त होते.	व्यवसाय व्यवस्थापन करण्याची क्षमता निर्माण होते.	स्वतंत्र व्यवसाय करु शकतो किंवा व्यावसायीक क्षेत्रात नोकरी करु शकतो.
B.com II	Corporate Accountancy	देशातील कपंन्याची स्थिति काय आहे त्याच प्रमाणे व्यवसायात भाग भाडंवल कशाप्रकारे उभारायचे या विषयी माहीती प्राप्त होते	व्यापक असे ज्ञान प्राप्त होते आणि भाग भाडंवल विषयी व व्यवसाया सरू करण्याची माहिती मिळते.	भाग भाडंवल विषयी सखोल ज्ञान प्राप्त होते त्यामुळे व्यावसायीक स्थिरता निर्माण होवून कपंनि क्षेत्रात नोकरी म्हणून काम करु शकतो.
B.Com III	Cast & Management Account	उत्पादन क्षेत्रातील माहिती गोळाकरुन व्यवसायातिल नफा तोटा काढण्याची क्षमता निर्माण होते.	योग्य माहितीच्या व निष्कर्षाच्या आधारे व्यावसायीक फायदे तोटे कशा मुळे होतात याचे ज्ञान प्राप्त होते	अनेक क्षेत्रात प्राध्यान्यान नोकरी मिळते किंवा उत्पादन क्षेत्रात काम करण्याची क्षमता निर्माण होते.
B. com I	Computer fundamental & operating system	lax.kdkP;k v|;kor KkukeqGs O;kikj o brj {ks=ke/;s ekfgrhph nsok.k ?ksok.k gksrs-	lax.kdkP;k okijkeqGs ns'kh o fons'kh O;kikjke/;s ok< gksowu ;ksX; leUo; lk/krk ;srks-	vkWuykbZu [kjsnh foØh dj.ks 'kD; gksrs xzkgdkl LoLr njke/;s oLrwapk iqjoBk gksÅu jkstxkj fufeZrh gksrs-
B.com II	Income tax & Auditing	vads{k.k o vk;djkfo"k;h ekfgrh izklr gksrs o vk;djkph jpuk dGrs	vads{k.k dk;ZØe o vk;dj jpuse/;s >kysys cny dGrkr-	osxosxG;k daiuh o laLFkakPkh vads{k.k rikl.kh d:u jkstxkj feGrks-
B. com III	Fundamentals of insurance	foek lsok fo"k;h ekghrh feGrs rlsp osxosxG;k ikWyhlhph ekfgrh feGrs	foek lsok {ks=k e/khy osxosxG;k ikWyhlh lkscr foek izrhfu/kh cu.;kph izfØ;k dGrs-	foek lsok {ks=ke/;s foekadu] ,tUV o czksdj Eg.kwu vFkkZtZu djrk ;srs-
B.Sc –I	**Zoology**	Classify Non-Chordata	Competence in basic sciences	Understand the diversity of non-chordata
Sem-I	Life and Diversity of Non-chordata	Write down the general characters of phylum Protozoa	Competence in the content of the specific courses that constitute the principal knowledge of their degree.	Know about animal structure and functions, their diversity.
		Write down the life history of *Plasmodium vivax*	Qualitative analysis and interpretation of biological data.	They become aware about environment. They know about transmission of characters and diseases in human beings
		Describe Parasitic protozoan and human diseases	Quantitative analysis of biological data.	They can start small scale industry on sericulture, Apiculture and Aquaculture & they become self-sufficient
		Describe the general characters of phylum Porifera		
		Describe Structure and significances of canal system of Scypha		
		Write down the general characters of phylum Coelenterata and its polymorphism		
		Describe the general characters of phylum Platyhelminthes		
		Write down the systems and Life cycle of *Fasciola hepatica*		
		Write down the life history of *Ascaris lumbricoides*		
		Describe the general characters of phylum Annelida		
		Describe External features of Leech		
		Describe the general characters of phylum Arthropoda		
		Write down the External features of Cockroach		
		Describe the general characters of phylum Mollusca		
		Describe Respiratory and Reproductive system of *Pila globosa*		
		Describe the general characters of phylum Echinodermata		
		Describe External features and Digestive system of Asterias		
		Describe Water vascular system of Asterias		
		Describe General Characters and Body organization of Balanoglossus		
B.Sc -II (S-III)	**Zoology**	Classify and explain Origin of Phylum Chordata	Competence in basic sciences	Students know about transmission of characters and diseases in animals and human being they become aware about environment and can take steps towards conservation
	Life and diversity of Chordata and concepts of evolution	Explain External Characters of Amphioxus	Competence in the content of the specific courses that constitute the principal knowledge of their degree.	
		Describe anatomy of Amphioxu	Identification of chordate animals	
		Describe Affinities of Agnatha	Anatomy and physiology of chordate animals	
		Describe diversity and External Characters of Scoliodon		
		Describe anatomy of Scoliodon		
		Describe Migration in fishes		
		Describe diversity and External Characters of *Rana tigerina*		
		Describe anatomy of *Rana tigerina*		
		Describe diversity and External Characters of Calotes versicolor		
		Describe anatomy of *Calotes versicolor*		
		Explain snake venom and anti-venom		
		Describe diversity and External Characters of Pigeon		
		Describe anatomy of Pigeon		
		Describe Flight adaptations and Migration in birds		
		Describe salient features and Morphology of Primitive mammals		
		Describe mammalian endocrine glands		
		Write down concept and evidences of Evolution		
		Explain Fossils and fossilization		
B.Sc -III (S-V)	Zoology	Describe Structure and functions of respiratory organs	1.Competence in basic sciences	Students know about molecular biology and modern techniques in biotechnology and immunology
	Animal Physiology And Economic Zoology	• Explain Respiratory pigments and exchange of gases in animals	2. Competence in the content of the specific courses that constitute the principal knowledge of their degree.	
		• Describe Blood Circulation	3. Qualitative analysis and interpretation of biological data.	
		• Describe Muscle Physiology	4. Quantitative analysis of biological data.	
		• Describe Nerve Physiology	5. Synthesis of information from the biological literature, and communication of it effectively in writing.	
		• Details about Neurotransmitters		
		• Describe Endocrine system and related diseases		
		• Describe Economic importance of Insects, Rodents, Snakes, Owls and Bats.		
		• Describe Apiculture - Sericulture		
		• Describe Aquaculture		
		• Write down about Fish products and byproducts		
B.Sc –I	**Zoology**	• Describe General organization of Prokaryote and Eukaryote Cell.	• Students get knowledge of cell its organization and structure function	Students know about animal structure and functions, their diversity. They become aware about environment. The know

Sem-II	Cell and Developmental Biology	• Describe Ultra structure and functions of, Plasma membrane	• they also gets knowledge about development process o f various animals	about transmission of characters and diseases in human beings They can start small scale industry on sericulture, Apiculture and Aquaculture & they become self-sufficient
		• Describe Ultra structure types and functions of, Endoplasmic reticulum		
		• Describe Ultra structure and functions of, Golgi complex		
		• Describe Ultra structure and functions of Ribosome		
		• Describe Ultra structure and functions of Mitochondria.		
		• Describe Ultra structure and functions of Lysosomes		
		• Describe Ultra structure and functions of nucleus and nucleolus.		
		• Describe Chromosome and its general organization.		
		• Describe Structure of Polytene and Lamp brush Chromosome.		
		• Identify developmental stages in Frog		
		• Identify developmental stages in chick.		
		• Describe Stem cells.		
B.Sc -II (S-IV)	**Zoology** Advanced Genetics and Animal Ecology	• Describe Concept of genes and Mendel`s laws	• Students become aware of Genetics, Ecology and help in conservation of animals of local level	
		• Describe Interactions of genes	• Students get knowledge of genetic Disorders and its remedies	
		• Explain Linkage and its significance	• They also gets knowledge about Human Health and Genetics	
		• Describe Crossing over and its Significance		
		• Explain Multiple alleles		
		• Describe Sex determination and related Theories		
		• Explain Environmentally and hormonally controlled sex determination, Gynandromorphs.		
		• Explain Genetic disorders		
		• Explain Genetic Screening and parental diagnosis Explain Genes in Human Heredity		
		• Explain Recessive genes and consanguineous marriages		
		• Explain Genetic counseling		
		• Explain Significance of twins study		
		• Explain Ecology		
		• Explain Biotic factors		
		• Explain Ecosystem		
		• Describe food chain		
		• Explain Terrestrial ecosystem		
		• Explain ecological characteristics types, fauna and their adaptations.		
B.Sc -III (S-VI)	**Zoology** Molecular Biology And Biotechnology	• Explain Genetic material-	• Students get knowledge of genetic material and and its molecular composition	Students get knowledge of various physiological processes and can understand various causes of disorders and functioning of body organs he also get the knowledge of Entomology and Aquaculture which will help to raise a Source of income through small scale Industries.
		• Explain Chemistry and types DNA	• They also gets knowledge about Human Health and Genetic diseases	
		• Explain Chemistry, types and function of RNA	• They get knowledge about techniques in Biotechnology	
		• Describe DNA replication		
		• Describe account of cistron, split genes, overlapping genes, jumping genes,		
		• Explain Genetic diseases		
		• Explain Genetic code and its features		
		• Explain Protein synthesis and transcription		
		• Explain Mutation		
		• Explain DNA repair process		
		• Explain Polymerase chain reaction (PCR).		
		• Explain Southern, Northern and Western blotting techniques, DNA finger printing.		
B. Sc. I (Sem - I)	Chemistry	Students will be able to understand, The periodic properties, detail understanding of S- block and P- block elements.	*Understand the importance of periodic table of elements, how it come to be and provide details of periodic properties, reactions and structures of their compounds.	*Many of the daily used materials are organic compounds, so it helps students get knowledge about these compounds.
		To have basic understanding in electronic displacement, reactive intermediates, reactions and reactivity of aliphatic and aromatic hydrocarbons.	*It helps students to apply concept of hybridization to different molecules to determine their geometries.	*Develop interest in various branches of chemistry.
		Laboratory course – Semimicro qualitative analysis of inorganic salt mixture and organic preparations.	*Students acquire skills to performing in laboratory experiments, students know the process of recystallization and mechanism and studied greener method of reactions.	*Students know industrial application by laboratory work at a level suitable to succeed at a entry-level position in chemical industry and professional schools.
			* Students can easily identified any organic compounds and physical practicals develop skills in handling viscometer and stalagmometer instruments.	*Know and follow proper procedure and regulations for safe handling and use of chemicals.
				*Develop skills in handling scientific instruments like spectrophotometer, P^H meter, conductometer and potentiometer.
B.Sc. I (Sem – II)	Chemistry	Students enable to understand		
		Formation of molecules on the basis of hybridization process and comparative study of P-block elements along with noble gases with respect to their periodic properties, preparation, reactions and properties of alkyl halides, aryl halides alcohols, phenols, ethers and epoxides		
		Laboratory course – Complete analysis of simple organic compounds containing one functional group and physical chemistry experiments.		
B. Sc. II (Sem – III)	Chemistry	Enable the students to understand,	*To develop interest in understanding of formation of simple molecules by studying molecular orbital theory, VSEPR theory.	
		Covalent bonding and metallic bonding in molecules, basic theory of Quantitative Inorganic Analysis, to learn chemistry of aldehydes, ketones, carboxylic acid compounds. Inculcate knowledge about optical, geometrical and conformational isomerism.	*Students will be able to understand stereochemistry of organic compounds.	
		Laboratory course – volumetric analysis and physical chemistry experiments.	*students able to understand metallic, nonmetallic and metalloid properties of d- block and f- block elements.	

			*Understand basic skills, fundamental principles of extraction of metals from minerals by knowing extraction methods.	
			*preparation, chemical reactions, structure and importance of protein and carbohydrates daily life can be understand.	
			*students develop skill in preparing molar and normal solutions.	
B. Sc. II(Sem –IV)	Chemistry	Students enable to understand,		
		Chemistry of transition series and Inner transition elements, extraction process and metallurgy.		
		Study of polynuclear hydrocarbons, reactive methylene compounds and carbohydrates, aromatic nitro compounds, amino compounds, diazonium salts and amino acids and proteins.		
		Laboratory course – Inorganic estimations and organic chemistry practicals.		
B. Sc. III (Sem – V)	Chemistry	Students enable to understand	Students get knowledge about	
		The basic principal of coordination chemistry, theories, stereochemistry, geometry of complex compounds and importance of chelates. Basic concept about Crystal Field Theory, Understood the reactions and preparation of heterocyclic compounds Develop the knowledge of dyes, drugs and pesticides.To understand the physical concepts like photochemistry and molecular spectroscopy	*Introduction of coordination compounds.	
		Laboratory course – Inorganic metal complex preparations and physical chemistry practicals.	*Introduction of preparation and applications of dyes, drugs and pesticides in daily life.	
			*To make aware of biological role, deficiency and toxicity of metals in human body and to understand role of hemoglobin in human blood.	
			*To determine the structure of compounds, different spectroscopic techniques are studied.	
			*Students acquire the knowledge and application of different electrochemical, electrolytic cells, nuclear reactions.	
B. Sc. III (Sem –VI)	Chemistry	Students enable to understand,		
		Kinetic aspects of metal complexes and learn basic concepts of analytical chemistry. Provide the knowledge of organometallic chemistry and Bio- inorganic chemistry. Electronic spectroscopy, Infrared spectroscopy, NMR Spectroscopy and Mass spectroscopy.		
		Study of electrochemistry and nuclear chemistry.		
		Laboratory course – organic chemistry experiments and physical chemistry experiments.		
B.Sc. –I	**Botany**	• To provide thorough knowledge about biodiversity and various primitive plant groups and their life cycle	• Competence in basic sciences	• Understand the diversity of Algae, Fungi, Bryophytes, pteridophytes and microorganism
Sem.-I	Diversity & application of microbes and cryptogams	• To make the student aware of applications of different lower groups plant used in various industries for medicinal, industrial products and also utilized as food.	• Students are able to learn about the lower groups of plants and their life cycle.	• Know the systematic, morphology and structure of Algae, Fungi, Bryophytes, Pteridophytes and microorganisms
			• Students will be able to compare and contrast the characteristics of plants, algae, fungi, bryophyte and Pteridophytes that differentiate them from each other and from other forms of life.	• Understand the economic importance of cryptogams
	• Plant Diversity			• To equip the students with skills related to laboratory as well as industries based studies
	• Algae			
	• Fungi			
	• Bryophyte			
	• Pteridophyte			
	Application of microbes cryptogams			
B.Sc. -I Sem.-II	**Botany**	• Know the scope of Paleobotany, types of fossils, its role in global economy and geological time scale	• Competence in basic sciences	• Understand the diversity of highly evolved groups of plants
	Gymnosperms, morphology of angiosperms and utilization of plants	• Understand the various fossil genera representing different fossil groups	• Student are able to learn about various Gymnospermic plants & fossils that help in the give information about ancestor link	• Know the evolutionary trends and affinities of living gymnosperms with respect to external and internal features
		• To provide thorough knowledge about Advanced plant groups like gymnosperms and angiosperms	• Students learn about the economic importance of different plants used in various industries	• Understand morphology and economic importance of Gymnosperm
	• Paleobotany	• Provide knowledge about morphologically about each part of plant like roots, stem, leaves (Their modification) and flowers		• Understand the habitat and know the vegetative characters of plants
	• Gymnosperms	• Utilization of plants to enable the students about the economic importance of food plants, spices, fiber/timber/oil yielding plants and pharmacognosy & phytochemistry of important medicinal plants		• To equip the students with skills related to laboratory as well as industries based studies
	• Morphology of angiosperms			
	• Utilization of plants			
B.Sc. -II Sem.-III	**Botany**	• Plant classification give information about plant to classify in different families	• Apply the knowledge of basic science, life sciences and fundamental process of plants to study and analyze any plant form	• Know the scope and importance of the discipline
	Angiosperm systematic, Anatomy & Embryology	• To give knowledge about chemical properties and evolutionary relationship among taxonomic groups.	• Identify the taxonomic position of plants, formulate the research literature, and analyze non reported plants with substantiated conclusions using first principles and methods of nomenclature and classification in Botany.	• Know the concept of methodology in taxonomy
		• Accurately interpretation of collected information and use taxonomical information to evaluate and formulate a position of plant in taxonomy.	• Students are able to learn about Anatomy & embryology of various types of plants.	• Know the conceptual development of taxonomy and systematics
		• Herbarium techniques give knowledge to help the identification of plants.		• Understand plant communities and ecological adaptations in plants
		• To describe Anatomical characters related to study of plant		• Discover botanical regions of India and vegetation of local region
		• Embryology gives information to student about the development of embryo to mature seed and original plants.		• Learn about conservation of biodiversity
B.Sc.-II	**Botany**	• Cell biology give knowledge about cell organelles, importance and their function	• Students know how to use Cell biology and Genetics applied in different scientific practices	• Students are able to understand the eukaryotic cell cycle

Sem.-IV	Cell biology, genetics and Biochemistry	• To know about the characters inherit by the cell and transfer to the next generation	• students learn about different cell organelles genomic structure under the unit of cell biology and genetics	• Structure and organization of cell membrane
		• Familiarize about evolution and emergence of evolutionary thoughts		• Understand the Biochemical nature of cell.
		• To give knowledge about cellular level to molecular level		• Process of membrane transport and membrane models
				• Mendelian and Neo-mendelian genetics
				• To understand the different types of genetic interaction, incomplete dominance, codominance, inter allelic genetic interactions, multiple alleles and quantitative inheritance etc.
				• Understand the mutagenesis practices which are applied in improvement in crops
				• Understand the different types of interaction in Biomolecules.
				• Concept of enzyme activity and enzyme inhibition
B.Sc.-III	**Botany**	• To give knowledge about water movement	• Student are able to learn about the movement of sap and absorption of water in plants	• Know importance and scope of plant physiology
Sem.- V	Plant physiology and Ecology	• To give knowledge about plant growth, plant metabolism, and structure between different groups of plant.	• Understand the issues of environmental contexts and sustainable development	• To understand the plants and plant cells in relation to water
		• To describe physiological characters related to study of plants	• Understand the plant movements	• Understand the process of photosynthesis in higher plants with particular emphasis on light and dark reactions, C3 and C4 pathways
	• Plant water relation	• Understanding the population structure of the organisms, organization into communities and their functional relationships with their environment	• Due to continuous field visit in the local regions student interact with the social activities for their study	• Understand the respiration in higher plants with particular emphasis on aerobic and anaerobic respiration
	• Plant metabolism and growth	• To provide knowledge about environmental factors and natural resources and their importance in sustainable development.	• The subject teach students about the ethical approach, not to cut the plants	
	• Plant responses	• Learn the Approaches to the study of Ecology		
	• Ecosystem and environment	• Studied various statistical methods of analysis		
B.Sc.-III	**Botany**	• Studied the genetic material, their chemical nature and function	• The curriculum made for the betterment of the student, enhance the ability and thinking power	• Understand the biochemical nature of nucleic acids, their role in living systems, experimental evidences to prove DNA as a genetic material
Sem.-VI	Molecular biology and biotechnology	• Provides a detailed view of the visualizing concepts and technique for genetic engineering and biotechnology	• Apply optimization, numerical methods, statistical methods to solve problems	• Understand the process of synthesis of proteins and role of genetic code in polypeptide formation
		• Learn the specific and non-specific methods of gene transfer	• Know about the genomic organization or living organism, study of genes, genome, chromosomes etc.	• To highlight the potential of these studies to become an entrepreneur to equip the students with skills related to laboratory as well as field based studies
	• Genetic material	• Understand the basic knowledge about tissue culture tools, medium, sterilization and techniques of tissue culture.	• Understand the fundamentals of genetic engineering	• To facilitate students for taking up and shaping a successful carrier in botany
	• Genetic engineering	• Study about the role of tissue culture in crop improvement	• Understand the principle and basic protocols for plant tissue culture	
	• Plant tissue culture	• Deals with all microbes and the technologies for their effective uses in industry and mitigation of environmental concerns.	• To study the techniques of production of new superior crop varieties	
	• Biotechnology	• To get acquainted with the subject in live forms and visits to industries		
B.Sc –I		• Explain the Kepler's laws of planetary motion, Newton's law of gravitation.	Knowledge about the Kepler's law of planetry motion	Student well demonstrate and understanding of core knowledge physics, including the all laws.
Sem-I	Physics (Mechanics, Properties of Matter, Waves and Oscillation)	• State & Explain Gauss's theorem.		
		• State & Explain Principle of Perpendicular & Parallel axes.	Known the concept of S.H.M.	
		• State Linear momentum, & angular momentum.		
		• Describe Linear S.H.M, Angular S.H.M, Differential equations and solutions.	Know the pendulum and its concepts & types.	
		• State and Explain Kater's Reversible pendulum.		
		• Describe Superposition of two SHM of same frequency along the same line		
		• State Hooke's Law of Elasticity.		
		• Explain the Relation between ,U, s, k		
		• State Streamline and turbulent flow.		
		• Explain equation of continuity.		
		• Prove that Bernoulli's theorem.		
		• State Reynold's number, Terminal velocity, Stokes' law.		
		• Discuss Variation of viscosity with temperature.		
		• State Surface tension, angle of contact and wetting,		
		• State& explain Jaeger's method		
B.Sc -I(S-II)	Physics	• Explain of Boyle's law.	1.Become familiar with various thermodynamic process and work done in each of these process.	Student will demonstrate return and oral communication skill in communicating physics related topic.
	(Kinetic theory, Thermodynamics and electric currents)	• Estimation of R M S speed of molecule;		
		• Explain (i)Avagadro's		
		• Number (ii) degrees of freedom.		
		• Derive Van der Wall's equation of state.		
		• Explain Transport Phenomena in gases.		
		• What is the effect of temperature and pressure on the mean free path of a gas		
		• State & explain The laws of		
		• Explain P-V indicator		
		• Diagrams.	2.Have a clear understanding about Reversible and irreversible process and also working of a Carnot engine, and knowledge of calculating change in entropy for various process.	
		• Explain First law of		
		• thermodynamics,		
		• Explain Reversible and irreversible		

		• State and prove Carnot		
		• Theorem.		
		• Principle of increase of Entropy.		
		• What is joule Thomson effect		
		• State.		
		• State & explain Thevenin theorem, Explain Maximum power transfer		
		• Theorem.		
		• Give the theory of moving coil Ballistic galvanometer .		
		• State the energy losses in the		
		• Compare series and parallel resonant		
B.Sc -II (S-III)		State Gradient, divergence and curl of a vector fields.	1.To have developed the idea of interference, diffraction and polarization and to solve problems related to the phenomena. understand about different laser systems and its applications.	Student will utilize a wide range of printed and electronic resource and information technology to support their research
		State & prove Gauss divergence theorem.	2.study about Basics electronics Technology. Realize the importance of different electronic communication systems.	
		theorem.Work done on charge in electrostatic field.		
		Define Lorentz force		
		equation and definition of B. Ampere's force law,		
		Explain Ampere's Law and its applications.		
		Explain Faraday's Law, Integral and differential form.		
		faraday's law, displacement current and Maxwell's		
		State Poynting vector and		
		Poynting theorem.		
		Explain Fermi level & energy level diagrams .		
		State & explain Hall effect.		
		State and explain working of BJT.		
		Prove JFET- construction & working ,		
		characteristics of FET.		
Bsc II (S IV)		State & explain Newton's ring.	To have developed the idea of interference, diffraction and polarization and to solve problems related to the phenomena. understand about different laser systems and its applications.	Student will demonstrate and understanding of the impact of physics and science on society
		Explain construction and theory of zone plate.	Know about other non-conventional energy sources like Ocean Thermal Energy Resources, Wind energy and Chemical energy resources.	
		State the Concept of polarization, optic axis, double refraction,		
		polarization by double refraction, phase retardation.		
		State the Theory of production of elliptically and circularly		
		polarized light, production and detection of elliptically.		
		Write down the different type of laser system. Ruby laser, He-Ne laser.		
		Explain of fiber optics.		
		Define the various renewable energy source.		
		State & explain Principle of Solar Thermal & its Application.		
		Explain the Operating principle,		
		State Photovoltaic cell concepts.		
B.Sc III		• Explaining Black body radiation and Photoelectric effect	To become familiar with Blackbody radiation, Ultraviolet catastrophe,	Student will demonstrate understanding of the application of numerical techniques for modeling physical system foe which analytical methods are in appropriate or of limited utility.
(Sem-V)		• State Assumptions of Planck's Quantum Theory.	PhotoElectric and hence be aware how quantum theory emerged Have gained a clear knowledge about wave properties of particles,De Broglie waves and its implications on the uncertainty principle. C03: Study the Bohr Atom model in detail. knows the use of hybrid parameter and Raman spectra	
		• Explain De Broglie Hypothesis.		
		• State and prove Germer experiment.		
		• Explain Concept of Wave Packet, Phase velocity, group velocity and Discuss relation between them.		
		• State and Prove Heisenberg's uncertainty principle.		
		• Explain Schrodinger time dependent equation.		
		• State & explain Stern Gerlach		
		• Experiment.		
		• State l-s and j-j coupling.		
		• Explain Duane and Hunt's law,		
		• Note the characteristic X-ray spectra.		
		• Explain theory of Raman effect &		
		• Experimental arrangement for		
		• Raman Spectroscopy.		
		• Explain Hybrid parameters- low frequency equivalent of CE		
		• amplifier & its analysis.		
		• State & explain negative & positive feedback.		
B.SC III (S VI)		**Define** Phase space, unit cell, microstates, macrostates.	importance of	Student will demonstrate proficiency in the acquisition of data using a variety of laboratory instruments and in the analysis and interpretation of such data.
	Physics	State the principle of equal a priori probabilities.	Thermodynamical functions and applications of Maxwell's relations.	
		State & prove Boltzman entropy	Familiarize in depth about statistical distribution and have basic Ideas about Maxwellboltzman,Bose-Einstein and Fermi Dirac Statistics.	
	(STATISTICAL MECHANICS AND SOLID STATE PHYSICS)	relation.		
		State Average speed, rms speed.		
		Write down the concepts of		
		boson &fermions.		
		Explain Bose – Einstein statistics.		
		Define Free electrons, conduction electrons.		
		State & Explain Curie's law, Weiss's law.		

		Derive Boltzman entropy		
		relation.		
		Explain Bose – Einstein statistics.		
		Fermi- Dirac distribution.		
		State mean free path.		
B.Sc -I (S-I)	Mathematics - Paper-I	Upon successful completion of Math-I - Algebra & Trigonometry, a student will be able to:	To develop scienctific attitude among the students of the rural area so as to serve the society in general and technical upgradation of the our nation like digitisation in particular. He should be capable of earning his livlihood or else of joining postgraduation	Upon successful completion of this Programme, the student will demonstrate basic knowledge in each of the following:
	(Algebra & Trigonometry)	• Represent complex numbers algebraically and geometrically.		1. Students will be able to select and utilize appropriate mathematical technology with which to analyze mathematical problems in a wide variety of areas.
		• Separate real and imaginary parts of the circular and hyperbolic functions of complex variable.		2. Students will be able to make rigorous mathematical arguments including how to both prove and disprove conjectures.
		• Sum the series based upon , , , , exponential series, logarithmic series and Gregory series.		3. Student will be able to construct multiple representations for selected topics from arithmetic, algebra, geometry, trigonometry, matrices and linear transformation.
		• Define Quaternion and its properties, like equality and addition, multiplication, complex conjugate, norm.		4. Students will be able to use the concepts of Analysis in solving problems. The fundamental concepts include sets, numbers, functions, and convergence.
		• Find rank of matrix, row rank & column rank, characteristic of matrix, eigen values and eigen vectors.		5. Students will be able to use the concepts of Algebra in solving problems. The fundamental concepts include equations, numbers, and algebraic structures.
				6. Students will be able to use the concepts of sequence, series, number theory in various competitive exam
B.Sc -I (S-I)	Mathematics Paper - II	Upon successful completion of Math-II - Differential and Integral Calculus, a student will be able to:		
	(Differential and Integral Calculus)	• Determine the continuity and differentiability of a function at a point and on a set.		
		• Examine various techniques of integration and apply them to definite and improper integrals.		
		• Compute limits, derivatives, and definite & indefinite integrals of algebraic, logarithmic and exponential functions,		
		• Apply the Rolle's theorem, Mean Value Theorem and the Fundamental Theorem of Calculus to problems in the context of real analysis		
B.Sc -II (S-III)	Mathematics	Upon successful completion of Mathematics-V - Advanced Calculus, a student will be able to:	To develop the interest and awareness about the language, culture and civilisation of our society. He should be in a position to render his services to the society and earn his livlihood	
	Paper - V	• Distinguish between the concepts of sequence and series, and determine limits of sequences and convergence and approximate sums of series.		
	Advanced Calculus)	• Check Convergence of sequence by using various tests		
		• Use of indetermidiate value property and fixed point property for function of two variables.		
		• Apply derivative concepts to find tangent lines to level curves and to solve optimization problems.		
		• Evaluation technique for double and triple integrals for area and volume.		
B.Sc -II (S-III)	Mathematics	Upon successful completion of Mathematics Paper - VI(Elementary Number Theory), a student will be able to:	Upon successful completion of this Programme, the student will demonstrate basic knowledge in each of the following:	
	Paper - VI	• Define and interpret the concepts of divisibility, congruence, greatest common divisor, prime, and prime-factorization,	1. Students will be able to select and utilize appropriate mathematical technology with which to analyze mathematical problems in a wide variety of areas.	
	(Elementary Number Theory	• Apply the Law of Quadratic Reciprocity and other methods to classify numbers as primitive roots, quadratic residues, and quadratic non-residues,	2. Students will be able to make rigorous mathematical arguments including how to both prove and disprove conjectures.	
		• Formulate and prove conjectures about numeric patterns, and	3. Student will be able to construct multiple representations for selected topics from arithmetic, algebra, geometry, trigonometry, matrices and linear transformation.	
		• Produce rigorous arguments (proofs) centered on the material of number theory, most notably in the use of Mathematical Induction and/or the Well Ordering Principal in the proof of theorems.	4. Students will be able to use the concepts of Analysis in solving problems. The fundamental concepts include sets, numbers, functions, and convergence.	
			5. Students will be able to use the concepts of Algebra in solving problems. The fundamental concepts include equations, numbers, and algebraic structures.	
B.Sc -III (S-V)	Mathematics	Upon successful completion of Mathematics Paper-VII (Modern Algebra: groups and rings), a student will be able to:		
	Paper - IX	• Assess properties implied by the definitions of groups and rings,		
		• Use various canonical types of groups (including cyclic groups and groups of permutations) and canonical types of rings (including polynomial rings and modular rings),		
		• Analyze and demonstrate examples of subgroups, normal subgroups and quotient groups,		
		• Analyze and demonstrate examples of ideals and quotient rings,		
		• Use the concepts of isomorphism and homomorphism for groups and rings, and		
		• Produce rigorous proofs of propositions arising in the context of Modern algebra.		
B.Sc – III (S-V)	Mathematics	Upon successful completion of Mathematics Paper –IX (Mathematical Analysis), a student will be able to:		
	Paper - X	• Determine the Riemann integrability of a bounded function and prove a selection of theorems concerning integration,		
	Mathematical Analysis)	• Discuss improper integrals and their convergence by using comparison and limit tests.		
		• Define and analyze limits and continuity for complex functions as well as consequences of continuity,		

		• Apply the concept and consequences of analyticity and the Cauchy-Riemann equations and of results on harmonic and entire functions,		
		• Define metric spaces, neighbourhood, limit point, interior point, open and closed sets		
B.Sc -II (S-III)	Mathematics Mathematical Methods	Upon successful completion of Mathematics Paper –X (Mathematical Methods), a student will be able to:		
		Solve Legendre's equation and Bessel's equation and interpret various recurrence formulae for $P_n (x)$ and $J_n (x)$.		
		Evaluate Fourier series, Fourier series for odd and even functions, half-range Fourier sine series and half-range Fourier cosine series.		
		Find Laplace Transform of function of one variable and to find inverse Laplace Transform by various methods		
		Solution of ordinary and partial differential equation by using Laplace Transform and Fourier Transform		
B.Sc -I (S-II)	Mathematics - Paper-III	Upon successful completion of Mathematics-III - Differential Equations: ordinary and partial, a student will be able to:	To develop scienctific attitude among the students of the rural area so as to serve the society in general and technical upgradation of the our nation like digitisation in particular. He should be capable of earning his livilhood or else of joining postgraduation	Upon successful completion of this Programme, the student will demonstrate basic knowledge in each of the following:
	((Differential Equations: ordinary and Partial)	• Solve linear differential equation of first order and exact differential equation.		1. Students will be able to select and utilize appropriate mathematical technology with which to analyze mathematical problems in a wide variety of areas.
		• Solve differential equations of first order using graphical, numerical, and analytical methods,		2. Students will be able to make rigorous mathematical arguments including how to both prove and disprove
		• Solve and apply linear differential equations of second order (and higher) with constant coefficient.		3. Student will be able to construct multiple representations for selected topics from arithmetic, algebra, geometry,
		• Be competent in solving linear PDEs using classical solution methods, Lagrange's method and Charpit's general method		4. Students will be able to use the concepts of Analysis in solving problems. The fundamental concepts include sets, numbers, functions, and convergence.
				5. Students will be able to use the concepts of Algebra in solving problems. The fundamental concepts include equations, numbers, and algebraic structures.
				6. Students will be able to use the concepts of sequence, series, number theory in various competitive exam
				7. Students will be able to demonstrate proficiency in the experimental techniques and methods of analysis appropriate for their area of specialization within Mathematics
B.Sc -I (S-I)	Mathematics Paper -IV (Vector Analysis and Solid Geometry)	Upon successful completion of Mathematics-IV - Vector Analysis and Solid Geometry, a student will be able to:	To develop scienctific attitude among the students of the rural area so as to serve the society in general and technical upgradation of the our nation like digitisation in particular. He should be capable of earning his livilhood or else of joining postgraduation	
		• Apply Scalar and vector product to determine angles between vectors, orientation of axes, areas of triangles and parallelograms in space, scalar and vector projections and volumes of parallelepipeds.		
		• Integral curves of vector fields and solving differential equations to find such curves,		
		• The differential ideas of divergence, curl along with their physical interpretations, using differential forms or tensors to represent derivative operations,		
		• Compute equation of cone with a guiding curve, cone with vertex and origin, equation of right circular cone and right circular cylinder.		
B.Sc -II (S-IV)	Mathematics	Upon successful completion of Mathematics Paper-VII (Modern Algebra: groups and rings), a student will be able to:		
	Paper - VII(Modern Algebra: groups and rings)	• Assess properties implied by the definitions of groups and rings,		
		• Use various canonical types of groups (including cyclic groups and groups of permutations) and canonical types of rings (including polynomial rings and modular rings),		
		• Analyze and demonstrate examples of subgroups, normal subgroups and quotient groups,		
		• Analyze and demonstrate examples of ideals and quotient rings,	To develop scienctific attitude among the students of the rural area so as to serve the society in general and technical upgradation of the our nation like digitisation in particular. He should be capable of earning his livilhood or else of joining postgraduation	
		• Use the concepts of isomorphism and homomorphism for groups and rings, and		
		• Produce rigorous proofs of propositions arising in the context of Modern algebra.		
B.Sc -II (S-IV)	Mathematics	Upon successful completion of Mathematics Paper-VIII (Classical Mechanics), a student will be able to:	To develop scienctific attitude among the students of the rural area so as to serve the society in general and technical upgradation of the our nation like digitisation in particular. He should be capable of earning his livilhood or else of joining postgraduation	
	Papper-VIII (Classical Mechanics)			
		• Interpret Lagrange's equations of motion for system of particles		
		• Use Euler's equation to Geodesic on any surface and to solve Brachistochrone problem		
		• Compute Euler-Poisson equations for a functional dependent on higher derivatives		
		• Discuss the linear motion of systems of Solve orbit problems using the conservation of angular momentum and total energy		
B.Sc -III (S-VI)	Mathematics	Upon successful completion of Mathematics-XII (Optional) (Graph Theory), a student will be able to:	To develop scienctific attitude among the students of the rural area so as to serve the society in general and technical upgradation of the our nation like digitisation in particular. He should be capable of earning his livilhood or else of joining postgraduation	
	Papper-XI) (Linear Algebra)	• Model and solve real-world problems using graphs and trees, both quantitatively and qualitatively.		
		• Use concept of graph and circuits in physics and engineering problems.		
		• Study application of graphs, finite and infinite graphs, incidence, degree, isolated vertex, pendent vertex, null graph and isomorphism.		
		• Study Vector space associated with a graph, circuit and cuteset subspaces.		

B.Sc – III (S-VI)	Mathematics Papper-XII (Graph Theory)	Upon successful completion of Mathematics-XII (Optional) (Graph Theory), a student will be able to:		
		• Model and solve real-world problems using graphs and trees, both quantitatively and qualitatively.		
		• Use concept of graph and circuits in physics and engineering problems.		
		• Study application of graphs, finite and infinite graphs, incidence, degree, isolated vertex, pendent vertex, null graph and isomorphism.		
		• Study Vector space associated with a graph, circuit and cuteset subspaces.		
		• Identify the resistors from its color		Students came to know about the basic electronic components and their functions, their applications. They become aware about the basic functioning of different electronic circuits. So that they can fabricate a small application circuits using different basic components.
B.Sc -I	**Electronics :**	• Classify the Inductors, Capacitors and transformers depending upon their construction and describe them in brief.		
(Sem-I)	Basic Electronics	• Explain the concept of ideal dc voltage and current source.		
		· State and explain the KVL, KCL, Thevenins, Nortons, maximum power transfer theorem and milimans theorem.		
		· Describe the Principles of working of voltmeter, ammeter, ohmmeter, Multirange DCvoltmeter, ohm per volt rating, loading effect, Multirange DCAmmeter, Series & shunt type ohmmeter, Multimeter (uses		
		· Draw and explain the Block diagram of CRO.		
		· Describe the working and construction of CRT along with its uses.		
		· Describe the measurement offrequency , amplitude& phase using CRO.		
		· Describe Operation and characteristics of PN junction diode.		
		· Describe Avalancheand Zener breakdown mechanism.		
		· Explain Half wave and full waverectifiers (ripple factor, efficiency, PIV		
		· Describe C, L and pFilters along with their waveform diagrams.		
		· Describe Concept of unregulated and regulated power supply,Zener diode voltage regulator, Three terminal IC regulator.		
		· Describe NPN and PNP transistor (construction and working) CB, CE & CC configuration.		
		· State leakage currents, Input and outputcharacteristics of CE mode, relation between a andb Loadline and operating point.		
		· Explain Amplification action of CE amplifier,biasing and stability, Self and fixed bias circuit.		
		· Describe Construction, working and characteristics of FET, MOSFET,UJT, SCR.		
B.Sc -I	**Electronics :**	· Define Binary, Octal & Hexadecimal number system and their interconversion**.**		
(Sem-II)	(Digital Electronics)			
		· Perform Binary arithmetic (addition and subtraction using 1's & 2's compliment), multiplication & division.		
		· Define Binary codes and perform their inter conversions: 8421 BCD, Excess-3 &Gray code.		
		· Define NOT, OR, AND, NAND, NOR gates, EXNOR & EXOR gates along with definition and truth table.		
		· Describe Half adder, full adder, 4 bitbinary full adder.		
		· Explain Boolean laws, De- morgans theorem, Simplification of Booleanequations using Boolean algebra, Fundamental products &sum terms, K-map (K-map upto 4		
		· Classify of logic families, characteristics (Fan-in, Fanout,Noise immunity, Propogation delay, Power dissipation),DTL,TTL& CMOS logic.		
		· Explain the Construction & working of Astable, monostable and Bistabletransistorised multivibrators.		
		· Classify RS, CK-RS, D, JK, JKMS and T Flip Flops on the basis of (Logic diagram, Truth table, construction &working), Concept of edge trigger Flip-Flop, Concept of preset& clear terminal.		
		· Explain construction and working of Asynchronous & synchronous Counter, Up-down counters (up to 4-bits), modified asynchronous counter (Mod -7,Mod-10 and		
		· Types of shift registers, SISO, SIPO, PISO & PIPO, IC version of Mod -10 shift registers (Construction & working), IC version of shift register – 7495, Application of shift register. Ring counter, Johnson's		
		· Encoder: Binary to BCD, Decimal to BCD, IC 74147,Decoder: 2 to 4 line, BCD to decimal, BCD to 7 segment, IC7447, Multiplexer: 4X1, 8X1, De multiplexer: 1X4, 1X8,(Definition, construction,		

			· Concept of memory, primary and secondary memory,classification of memories, volatile and non-volatile memories, memory Hierarchy, semiconductor memory: RAM, ROM,		
B.Sc -II (S-III)	Electronics		• Hybrid-parameters, transistor equivalent circuit of CE,CB,Analysis of small signal CE amplifiers. Concept of cascaded amplifier, Types of coupling, RC Coupled Amplifier, Single Tuned amplifiers.		
	(Electronic devices and circuits)				
			· Classification of power amplifier, Class A, Class B, Class C and Class AB amplifiers, Class A - transformer coupled amplifier, Class-B push-pull amplifier (Construction, working and efficiency of each). Distortion, complementary symmetry		
			· Concept of feedback, feedback theory, positive and negative feedback, advantage of negative feedback,physical idea of feedback,(Block diagram only),concept of oscillator, basic elements of oscillator, BarkhausenCriteria of oscillation, concept of tank circuit. RC oscillator-Phase shift and Wein bridge oscillator, LC oscillator-Colpitts and Hartley oscillator, Crystal		
			· Difference amplifier(concept, construction and working),block diagram operational amplifier, characteristics of ideal op amp, concept of virtual ground, parameter of opamp (input impedance, output impedance, open loop gain,close loop gain, CMRR, slew rate, input offset voltageand current, input bias current). Applications: Op Ampas inverting and non-inverting		
			• Solution to simultaneous equation, differential equationfor harmonic, damped harmonic oscillator, regenerative comparator, logarithmic amplifier, Astable, Monostableand Bistablemultivibrator and its time period (construction and working).		
			• Need of A/D and D/A converter. D/A converter: R-2R ladder type, Weighted resistor, sample and hold circuit, IC ADC, DAC specification. A/D converter: Single and Dual slope, counter type, successive approximation type, specification, Numerical based on A/D and D/A Converter.		
B.Sc -III (S-IV)	Electronics		• Need for modulation, AM theory, Power relation, Theory of FM ,Numerical on AM and AM Systems , frequency spectrum of FM . Generation of AM and FM . Collector modulator , diode reactance modulator. Demodulator: diode detector , slope detector. Transmitter and receiver :Block diagram and working ofAM and FM		
	(Measuring Instruments)				
			· Introduction ,advantages of OFC, types of fibers,internalreflections ,numerical aperature. Optical Sources :Semiconductor injection LASER , LED ,(power and efficiency chacteristics). Optical detectors : Photodiode , PIN diode , Phototransistor . Optical fiberconnection : Jointer and coupler ,fiberalignment and joint losses ,connector		
			· Pulse Modulation, Sampling Theorem PAM ,PWM ,PPM and PCM (Bandwith of PCM ,Quantizing Noise) , application of PCM , Multiplexing Principles : TDM and FDM Comparison of FDM and TDM .		
			· Evolution of microprocessor, microcomputer (Block		
			diagram with function of each block),architecture of Intel8085 microprocessor, function of each block of 8085,Functional pin diagram and function of all pins of 8085,instruction format. Instruction cycle, fetch and execute operation, machine cycle and state, timing		
			· Addressing mode, classification of instruction set of 8085 with examples, concept of stack and stack pointer, PUSH and POP instruction, Concept of subroutine: CALL and RET instruction, Delay subroutine (using one register and register pair).Programming: Algorithm, Flowchart, Assembly and machine language, assembly language program such asprogramme for addition, subtraction, multiplication, division, finding maximum and minimum		

		· Basic interfacing concept, memory mapped I/O and I/O mapped I/O Schemes, data transfer schemes. 8255PPI: block diagram, function of each block, Functional pin diagram, function of each pin, operating modes of 8255PPI, control word format in I/O and BSR mode, illustrative example.		
B.Sc -III (S-V)	Electronics	• Block diagram of generalized instrumentation system, Concept of transducers (Primary and secondary, active and passive, analog and digital). Resistive transducer - potentiometer, Inductive transducer - LVDT, capacitive transducer(by changing distance), measurement		
	(Advanced Microprocessor and Microcontroller)	• Thermocouple,Thermopile, Thermister, RTD, Total Radiation Pyrometer, IC DS 1621, IC LM34, IC		
		· IC 555 timer: Block diagram and function of each block, application of 555 timer as astable, bistable andmonostablemultivibrator (construction,		
		· PLL Block diagram and function of each block, concept of capture range, pull in time, lock in range, electricalcharacteristics, applications of PLL as FM demodulator, AM detector and frequency synthesizer.		
		· Seven segment, 14 segment, dot matrix, 16x2 LCD display,advantage and disadvantage, Digital instrument: Digitalfrequency meter, Digital voltmeter (Ramp type), Digitalcapacitance meter		
		· Recorder: Classification, necessity of recorder, XY recorder, magnetic tape		
B.Sc –I	**Computer Science**	• **Introduction to Computers :**	Students will attain an ability to apply knowledge of computing and mathematics appropriate to the discipline.	• Understand the basic Knowledge About computers
Sem-I		• Describe the Characteristics, classification of Computers,		
	Computer Fundamentals and C Programming	• Explain block diagram of computer.	To be able to identify, formulate ande solve computer science problern	• Know about Computer structure and I\O devices
		• Describe memory and their types and Peripheral devices & printers.		
		• **Introduction of OS** : Explain types of OS	Students will attain to design , implement, and evaluate a computer-based system, process, component or programming to meet desired needs.	• Knowledge about networking and windows system.
		• Describe File handling and File		
		• What is networking & types of networking		• The basic knowledge about programming languages
		• Explain the concepts of Programming, Algorithm flowcharting programming		
		• What is structured programming explain features and approaches.		
		• Explain the Introduction to C, History, features structure of C program.Explain operaters in c language.		
		• What is Control structure , Explain if , if... else, nested if, Looping for, while, do..while, break, continue.		
B.Sc -I (Sem - II)	Computer science	• Explain the history of HTML & Structure of HTML document.	Competence in the content of the specific courses that constitute the principal knowledge of their degree.	• Students know the information about (Hyper Text Markup Languages) HTML and XML
		• Describe the Tags.		
	Web Technology and Advanced programming g in C	• What is XML and its features and components of XML document	Student will attain an ability to analyze the local and global impact of computing on individuals, organization .	
		• Introduction of DTD , needs of DTD		• Knowledge of (CSS) style sheet and programmings
		• Explain style sheet , Advantages and application of style sheet.		
		• Describe the CSS and types of style		
		• Explain Arrays & pointers, and its declaration and initialization.		
		• Explain string , operations of strings and string function		
		• Describe the functions and needs of		
		• Local and global variable		
		• Describe the structure , unions		
		• What is file handling . Explain operation on file.		
B.Sc -II (Sem III)	Computer science	• Describe Data Structure and Types of data structure	Competence in basic sciences	• Students knowledge about the Data Structure and programming languages
		• Describe the concepts of Linear array, Stack, Queue, Link list, Tree.		
	Data structure and C++	• Describe the concept of Object Oriented Programming and its feature	Student will attain recognition of the need for an ability to engage in continuing professional Development.	
		• Explain structure of C++ languages		
		• Describe the managing console I\O : Formatted and Unformatted.		
		• Constructor and Destructor. Explain types of constructor.		
		• Describe operator overloading, Inheritance		
B.Sc -II	Computer Science	• Describe Fundamentals of DBMS, Architecture of a database system.	Students will attain an ability to use current technique, skill, and tools necessary for computing practices	• Students know the Data base management system.
Sem-IV		• Explain the database models.		
	RDBMS & PL/SQL	• What is Relational Model , Domains and Attributes		• Knowledge about Structure Query Language
		• Describe E-R diagrams .		

		• Explain the term Normalization and types of normalization.		
		• Describe the SQL commands, DDL commands		
		• Functions and its types		
		• PL/SQL .Explain feature and block structure of PL/SQL		
		• Describe Transaction		
		• Explain securities of Database.		
B.Sc -III (Sem-V)	Computer Science	• Describe Fundamentals of DBMS, Architecture of a database system.	To have solid knowledge in computer science including programming and languages,algorithums, theory,	• Students know the Data base management system.
		• Explain the database models.		
	RDBMS & Visual Basic	• What is Relational Model , Domains and Attributes	II. To be able to communicate effectively.	
		• Describe E-R diagrams .		
		• Explain the term Normalization and types of normalization.		
		• Describe the SQL commands, DDL commands		
		• Describe introduction of visual basic and programs in VB.		
		• What is mean by creating menus and operators in VB.		
		• Explain introduction to internal function .		
B.Sc -III (S-VI)	Computer Science	• Explain Data integrity ,and types of data integrity		Students get knowledge of various physiological processes and can understand various causes of disorders and functioning of body organs he also get the knowledge of Entomology and Aquaculture which will help to raise a Source of income through small scale Industries.
		• Describe functions.	I. Competence in the content of the specific courses that constitute the principal knowledge of their degree.	
	PL/SQL & Advanced VB	• PL/SQL .Explain feature and block structure of PL/SQL		
		• Describe Transaction	II. Students will attain an ability to apply knowledge of computing and mathemetics appropriate to the	
		• Explain securities of Database.		
		• Describe Dilog Box control and needs of controls.		
		• Workings of forms in VB.		
		• Explain working with files.		