

NATIONAL COLLEGE (AUTONOMOUS)
Nationally Re-Accredited at “A+” Level by NAAC
Tiruchirapalli – 620 001
Under Graduate Programme Structure under CBCS
(For candidates admitted from the year 2019 – 2022 onwards)

B.Sc. (Computer Science)

Eligibility:

- Candidates for admission to the first year programme leading to the Degree of Bachelor of Computer Science will be required to possess.
- Pass with 50% of marks in HSC. In case of SC/ST candidates, merely pass with 40% of marks in HSC will be sufficient.

Aim:

This Programme is a high quality degree program that ensures that students will be able to integrate theory and practice, recognize the importance of abstraction and appreciate the value of efficient design created to meet clearly developed requirements.

Objective:

- The B.Sc. degree in Computer Science provides students the opportunity to acquire knowledge and skills, to develop their understanding creatively and professionally.
- The Programme balances theory with ‘real world’ practice in information and computer management.
- Students will acquire a comprehensive understanding of computer science and a grasp of the central elements of a computer system.
- Graduates will be prepared for the next step in their careers, for example, having done a research project (for those headed to graduate school), a programming project (for those going into the software industry), or some sort of business plan (for those going into startups).

Program Specific outcomes (PSOs)

Our clear instructional objectives which are mapped to the student outcomes.

PO1: Ability to apply knowledge of computing, mathematics, and basic sciences that may be relevant and appropriate to the domain

PO2: Ability to analyze a problem, identify and define the computing requirements, which may be appropriate to its solution

PO3: Ability to design, implement, and evaluate computer-based system, process, component, or program to meet desired needs

- PO4:** Ability to function effectively on teams to accomplish a common goal
- PO5:** Understanding of professional, ethical, legal, security, social issues and responsibilities
- PO6:** Ability to communicate effectively among a range of audiences
- PO7:** Ability to analyze the local and global impact of computing on individuals, organizations, and society
- PO8:** Recognition of the need for and an ability to engage in continuing professional development.
- PO9:** Ability to use current techniques, skills, and tools necessary for computing practices.
- PO10:** Ability to use and apply current technical concepts and practices in the core development of solutions in the form of Information technology
- PO11:** Ability to identify and analyze user needs and take them into account in the selection, creation, evaluation, and administration of computer-based systems
- PO12:** Ability to incorporate effectively integrate IT-based solutions to applications

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Sem	Part	Course Title	Hours/ Week	Credit	Marks		Total	
					Int. 25	Ext. 75		
I Sem	I	U19T1, U19H1, U19S1 - Tamil – I / Hindi – I / Sanskrit – I	6	3	25	75	100	
	II	U19E1 - English -I	6	3	25	75	100	
	III	U19CS1 – Programming in C		5	5	25	75	100
		U19CS2P - Programming in C Lab		3	5	25	75	100
		U19AMS1C – Mathematics – I		5	3	25	75	100
	U191AMS2C - Mathematics - II		3	--	25	75	-	
IV	U19ES – Environmental Studies		2	2	25	75	100	
		Paper : 7	30	21			600	
II Sem	I	U19T2, U19H2, U19S2 - Tamil – II / Hindi – II / Sanskrit – II	6	3	25	75	100	
	II	U19E2 - English - II		4	2	25	75	100
		U19CE1 - Communicative English - I		2	1	25	75	100
	III	U19CS3 – C++ and Data Structure		5	5	25	75	100
		U19CS4P – C++ and Data Structure Lab		3	3	25	75	100
		U19AMS2C - Mathematics - II (Operations Research)		3	3	25	75	100
	U19AMS3C – Mathematics -III		5	3	25	75	100	
IV	U19SBE1C – Skill Based Elective I – Web page designing using HTML		2	2	25	75	100	
		Paper : 8	30	22			800	
III Sem	I	U19T3, U19H3, U19S3 - Tamil – III / Hindi – III / Sanskrit – III	6	3	25	75	100	
	II	U19E3 - English - III		6	3	25	75	100
	III	U19CS5 – Database Management System		6	4	25	75	100
		U19CS6P- RDBMS Lab		3	3	25	75	100
		U19APH1C – Allied Paper – I (Physics)		5	3	25	75	100
	IV	U19SBE2C- Skill Based Elective II – Java Script & PHP		2	2	25	75	100
U19SBE3CP - Skill Based Elective III – HTML, Java Script and PHP Lab		2	2	25	75	100		
		Paper : 7	30	20			700	

IV Sem	I	U19T4, U19H4, U19S4 - Tamil – IV / Hindi – IV / Sanskrit – IV	6	3	25	75	100
	II	U19E4 - English - IV	4	2	25	75	100
		U19CE2 - Communicative English - II	2	1	25	75	100
	III	U19CS7 – Visual Programming	4	4	25	75	100
		U19CS8 P– Visual Programming Lab	2	3	25	75	100
		U19APH2C– Allied Paper – II	5	3	25	75	100
	IV	U19APH3CP – Allied Paper – III Lab	3	3	25	75	100
		U19NMC1 – Basic Concepts of Computer Science	2	2	25	75	100
		U19VE – Value Education	2	2	25	75	100
	Extra Credit Course I : Android Applications	-	4*	25	75	100*	
	Extra Credit Course II : Multimedia Technology.	-	4*	25	75	100*	
	Paper : 9	30	23			900	
V Sem	III	U19CS9 – Programming in Java	6	3	25	75	100
		U19CS10P – Programming in Java Lab	6	6	25	75	100
		U19CS11E- PC Hardware & Troubleshooting/ Computer Hardware & Peripherals / Network Essentials & Management	5	5	25	75	100
		U19CS12E – Computer Graphics / Principles of Animation/ Visual Effects	5	4	25	75	100
		U19CS13 – Computer Networks	4	4	25	75	100
	IV	U19NMEC2 – Internet and its Applications	2	2	25	75	100
		U19SS – Soft Skill	2	2	25	75	100
		Extra Credit Course III: BPO (Business Process Outsourcing).	-	4*	25	75	100*
	Paper : 7	30	26			700	
VI Sem	III	U19CS14 – Operating Systems	6	5	25	75	100
		U19CS15 -Software Engineering	6	5	25	75	100
		U19CS16– Python Programming	6	5	25	75	100
		U19CS17P– Python Programming Lab	5	6	25	75	100
		U19CS18E – E-Commerce and its Applications / Data Mining / Linux	6	5	25	75	100
	V	U19GS – Gender Studies	1	1	25	75	100
		Extension Activity		1	25	75	100
	Extra Credit Course IV: Cloud Computing.	-	4*	25	75	100*	
	Paper : 7	30	28			700	
	GRAND TOTAL	180	140	-	-	4400	

*Extra Credit Course are not included in Grand Total.

தேசியக்கல்லூரி (தன்னாட்சி), திருச்சிராப்பள்ளி - 620 001.
தமிழாய்வுத்துறை

இளநிலை - தமிழ் - முதற் பருவம்
தாள்: மொழிப்பாடம்-1 செய்யுள் (கவிதை), உரைநடை, சிறுகதை,
இலக்கிய வரலாறு, இலக்கணம்

U19T1

கற்பிக்கும் காலம்: 6 மணி
கற்பித்தலின் நோக்கங்கள்

தரப்புள்ளிகள்: 3

1. இக்கால மரபுக்கவிதை, புதுக்கவிதை, சிறுகதை, உரைநடைக்கட்டுரைகளை அறிமுகம் செய்தல்.
2. நாட்டுப்புறப்பாடல்களைப் புலப்படுத்துதல்.
3. எழுத்துக்களின் வேறுபாட்டால் பொருள் மாறுபடலை எடுத்துரைத்தல்.

அலகு - 1: மரபுக்கவிதை

பாரதியார்	- கண்ணன் என் சேவகன், கண்ணன் என் விளையாட்டுப் பிள்ளை.
பாரதிதாசன்	- அழகின் சிரிப்பு
கவிமணி	- வாழ்க்கைத் தத்துவங்கள், இயற்கை வாழ்வு
பட்டுக்கோட்டையார்	- படிப்பும் உழைப்பும், நேர்மை வளையுது
நாமக்கல்லார்	- படிப்பினை
கண்ணதாசன்	- காலக்கணிதம், ஒரு கந்தல் துணியின் கதை
சுரதா	- நீர்

அலகு - 2: புதுக்கவிதை, நாட்டுப்புறப்பாடல்கள்,

வாலி	- ஒரு கௌதமன் வாரானோ!, புன்னகை மன்னன்
மு.மேத்தா	- ஒரு கிராமத்தின் கதையல்ல
அப்துல் ரகுமான்	- சிறகுகள், சுயப்பிரசவம்
ஈரோடு தமிழன்பன்	- மின்மினிக்காடு
அறிவுச்செல்வன்	- நமக்குத் தொழில் மனிதம்
விக்ரமாதியன்	- நிகழ்வுகள்
பொன்மணி வைரமுத்து	- வாழ்க்கை தொடங்குகிறது

நாட்டுப்புறப் பாடல்கள்:

- (1) தாலாட்டு
- (2) கும்மிப்பாடல்
- (3) வேளாண்மை

அலகு - 3: உரைநடைக் கட்டுரைகள்

1. டிங்கினானே - உ.வே.சாமிநாத ஐயர்
2. கடற்கரையிலே - சிதம்பரனார் - ரா.பி.சேதுப்பிள்ளை
3. கம்பரும் நாடகப் பண்பும் - ரசிகமணி டி.கே.சிதம்பரநாத முதலியார்
4. முடத்தெங்கு - கி.ஆ.பெ. விசுவநாதம்
5. இராமன் எத்தனை இராமனடி - முனைவர் சோ.சத்தியசீலன்
6. உரைநடையின் அணிநலன்கள் - முனைவர் மா.இராமலிங்கம்
7. திருவள்ளுவர் குறிப்பிடும் மென்திறன்கள் - முனைவர் ம.திருமலை

அலகு - 4: சிறுகதைகள்

- | | |
|------------------|------------------------|
| 1. கவர்னர் வண்டி | - கல்கி |
| 2. நினைவுப்பாதை | - புதுமைப்பித்தன் |
| 3. சோற்றுச்சுமை | - ஜெயகாந்தன் |
| 4. முள்முடி | - தி.ஜானகிராமன் |
| 5. காற்று | - கு.அழகிரிசாமி |
| 6. ஆயுள் | - பிரபஞ்சன் |
| 7. அசலும் நகலும் | - இந்திரா பார்த்தசாரதி |
| 8. மாத்திரை | - ஆண்டாள் பிரியதர்னி |

அலகு - 5: இலக்கிய வரலாறு, இலக்கணம்

இலக்கிய வரலாறு. (மரபுக்கவிதை, புதுக்கவிதை, உரைநடை, சிறுகதை மட்டும்) - மயங்கொலிச்சொற்கள், ல,ள,ழ, ர,ற, ன,ண,ந வேறுபாடுகளால் பொருள் மாறுபடுதல்.

குறிப்பு: ஐந்து அலகுகளிலும் சம அளவில் வினாக்கள் அமைதல் வேண்டும்.

பாடநூல்

1. தமிழ் - முதற் பருவம் - தேசியக்கல்லூரி வெளியீடு.
2. இலக்கிய வரலாறு - தேசியக்கல்லூரி வெளியீடு.

கற்பித்தலின் பயன்கள்

1. இக்காலத் தமிழை உணர்வர்.
2. கவிதை, சிறுகதை படைக்கும் ஆற்றல்களை வளர்த்துக் கொள்வர்.
3. இலக்கணப் பிழையின்றி எழுத முயற்சிப்பர்.

தேசியக்கல்லூரி (தன்னாட்சி), திருச்சிராப்பள்ளி - 620 001.
தமிழாய்வுத்துறை
இளநிலை - தமிழ் - இரண்டாம் பருவம்
தாள்: மொழிப்பாடம்-2 செய்யுள் (பக்தி இலக்கியம்), புதினம்,
இலக்கிய வரலாறு

U19T2

கற்பிக்கும் காலம்: 6 மணி
கற்பித்தலின் நோக்கங்கள்

தரப்புள்ளிகள்: 3

1. பல்வேறு சமய நெறிமுறைகளை உணர்த்துதல்.
2. பக்தி இலக்கிய மாண்பினைப் புலப்படுத்துதல்.
3. புதின இலக்கிய வகையை அறிமுகம் செய்தல்.

அலகு - 1: சைவ இலக்கியம்

திருஞானசம்பந்தர் - திருச்சிராப்பள்ளி - நன்றுடையானை தீயதிலானை.
திருநாவுக்கரசர் - தில்லைப் பெருங்கோயில் - கருநட்ட கண்டனை.
சுந்தரர் - திருமழபாடி - பொன்னார் மேனியனே
மாணிக்கவாசகர் - திருச்சாழல் - பூசுவதும் வெண்ணீறு.

அலகு - 2: வைணவ இலக்கியம்

திருப்பாணாழ்வார் - அமலனாதிபிரான் - அமலனாதிபிரான் அடியார்க்கு
தொண்டரடிப்பொடியாழ்வார் - திருமாலை - பச்சைமாமலை போல் மேனி
ஆண்டாள் - நாச்சியார் திருமொழி - வாரணம் ஆயிரம் சூழ
நம்மாழ்வார் - திருவாய்மொழி - உயர்வற உயர்நலம்

அலகு - 3: பிற சமய இலக்கியங்கள்

சமண சமயப் பாடல்கள் - 10
பௌத்த சமயப் பாடல்கள் - 10
காசீம் புலவர் - முனாஜாத்துப் பதிகம் -10
ஹெச்.ஏ.கிருஷ்ணபிள்ளை - இரட்சணிய மனோகரம் தோத்திரப்பதிகம் - 10

அலகு - 4: புதினம்

துளசிமாடம் - நா.பார்த்தசாரதி.

அலகு - 5: இலக்கிய வரலாறு, இலக்கணம்

இலக்கிய வரலாறு (சைவம், வைணவம், சமணம், பௌத்தம், இசுலாம், கிறித்தவம்
மற்றும் புதினம் பற்றியன மட்டும்), வல்லினம் மிகும் இடங்கள், வல்லினம் மிகா இடங்கள்.

குறிப்பு: ஐந்து அலகுகளிலும் சம அளவில் வினாக்கள் அமைதல் வேண்டும்.

பாடநூல்

1. தமிழ் - இரண்டாம் பருவம் - தேசியக்கல்லூரி வெளியீடு.
2. இலக்கிய வரலாறு - தேசியக்கல்லூரி வெளியீடு.
3. புதினம் - துளசிமாடம் - நா.பார்த்தசாரதி - தேசியக்கல்லூரி வெளியீடு.

கற்பித்தலின் பயன்கள்

1. வேறுபட்ட சமய வழக்காறுகளை அறிவர்.
2. பிற சமயத்தார்களிடம் அன்பு பாராட்டுவர்.
3. புனைகதை வடிவங்களில் புதினம் பற்றி அறிவர்.

தேசியக்கல்லூரி (தன்னாட்சி), திருச்சிராப்பள்ளி - 620 001.
தமிழாய்வுத்துறை

இளநிலை - தமிழ் - மூன்றாம் பருவம்
தாள்: மொழிப்பாடம்-3 செய்யுள் (காப்பியம்), நாடகம்,
இலக்கிய வரலாறு, பொதுக்கட்டுரை

U19T3

கற்பிக்கும் காலம்: 6 மணி

தரப்புள்ளிகள்: 3

கற்பித்தலின் நோக்கங்கள்

1. காப்பிய இலக்கியத்தின் செழுமையை உணர்த்துதல்.
2. காப்பியங்களின் உட்பொருளையும் கவியழகையும் புகட்டுதல்.
3. நாடகத்தின் மேன்மையை உணரச் செய்தல்.

அலகு - 1:

சிலப்பதிகாரம் - அடைக்கலக்காதை
மணிமேகலை - ஆதிரை பிச்சையிட்ட காதை.

அலகு - 2:

கம்பராமாயணம் - கும்பகர்ணன் வதைப்படலம்
பெரியபுராணம் - மெய்ப்பொருள் நாயனார் புராணம்

அலகு - 3:

தேம்பாவணி - வளன் சனித்த படலம்
சீறாப்புராணம் - மானுக்குப் பிணை நின்ற படலம்.

அலகு - 4:

நாடகங்கள்:
1. விசுவநாதன் அல்லது கடமை முரண்.
2. மௌனதேசிகர் - பண்டித ம.கோபாலகிருணய்யர்

அலகு - 5:

இலக்கிய வரலாறு (காப்பியம், புராணம், நாடகம் பற்றியன மட்டும்),
பொதுக்கட்டுரை.

குறிப்பு: ஐந்து அலகுகளிலும் சம அளவில் வினாக்கள் அமைதல் வேண்டும்.

பாடநூல்கள்

1. தமிழ் - மூன்றாம் பருவம், தேசியக்கல்லூரி வெளியீடு.
2. இலக்கிய வரலாறு - தேசியக்கல்லூரி வெளியீடு.
3. நாடகங்கள் - தேசியக்கல்லூரி வெளியீடு.

கற்பித்தலின் பயன்கள்

1. தமிழ்க் காப்பியப் பரப்பினை அறிவர்.
2. காப்பியங்களின் வழிநின்று புதிய முறையில் கற்பனையாற்றலைப் பெறுவர்.
3. நாடகத்தை உருவாக்கவும் நடிக்கவும் பழகுவர்.

தேசியக்கல்லூரி (தன்னாட்சி), திருச்சிராப்பள்ளி - 620 001.

தமிழாய்வுத்துறை

இளநிலை - தமிழ் - நான்காம் பருவம்
தாள்: மொழிப்பாடம் - 4 : செய்யுள் (பண்டைய இலக்கியம்),
இலக்கிய வரலாறு, மொழிபெயர்ப்பு

U19T4

கற்பிக்கும் காலம்: 6 மணி

தரப்புள்ளிகள்: 3

கற்பித்தலின் நோக்கங்கள்

1. அக, புற இலக்கியங்கள் பற்றி விளக்குதல்.
2. சங்கப் புலவர்களின் புலமைச், சிறப்பை எடுத்துரைத்தல்.
3. சங்ககால மக்களின் இல்லற மாண்பினை உணர்த்துதல்.

அலகு - 1:

நற்றிணை (5 பாடல்கள் - 242, 333, 353, 375, 380)

1. இலையில் பிடவம் ஈர்மலர் அரும்பப் - விழிக்கட் பேதைப் பெருங்கண்ணனார் - முல்லை.
2. மழைதொழில் உலந்து மாவிகம்பு கந்தெனக் - கள்ளிக்குடி பூதம் புல்லனார் - பாலை
3. ஆளில் பெண்டிர் தாளின் செய்த - கபிலர் - குறிஞ்சி.
4. நீடுசினைப் புன்னை நறுந்தாது உதிரக் - பொதும்பில் கிழார் - நெய்தல்.
5. நெய்யும் குய்யும் ஆடி மையொடு - கடலூர்ப் பல்கண்ணனார் - மருதம்.

குறுந்தொகை - (5 பாடல்கள் - 3, 27, 38, 135, 186)

1. நிலத்தினும் பெரிதே வானினும் உயர்ந்தன்று - தேவகுலத்தார் - குறிஞ்சி
2. கன்றும் உண்ணாது கலத்தினும் படாது - வெள்ளிவீதியர் - பாலை
3. கான மஞ்சை அறையின் முட்டை - கபிலர் - குறிஞ்சி
4. வினையே ஆடவர்க்குயிரே வானுதல் - பாலை பாடிய பெருங்கடுங்கோ - பாலை
5. ஆர்கலி ஏற்றொடு கார்தலை மணந்த - ஒக்கூர் மாசாத்தியார் - முல்லை

அலகு - 2:

அகநானூறு - (3 பாடல்கள் - 40, 48, 53)

1. கானல் மாலைக் கழிப்பூக் கூம்ப - குன்றியனார் - நெய்தல்
2. அன்னாய்! வாழி! வேண்டு அன்னை! நின்மகள் - தங்கால் முடக்கொற்றனார் - குறிஞ்சி
3. அறியாய், வாழி, தோழி! இருள்அற - சீத்தலைச்சாத்தனார் - பாலை

கலித்தொகை - 2 பாடல்கள்

1. எறிதரு கதிர் தாங்கி ஏந்திய குடை நிழல் - பாலைக்கலி : 8
2. முறம் செவி மறைப் பாய்பு முரண் செவ்வ புலி செற்று - குறிஞ்சிக்கலி : 16

அலகு - 3:

புறநானூறு (5 பாடல்கள் - 9, 45, 74, 101, 112,)

1. ஆவும் ஆனியற் பார்ப்பன மாக்களும் - நெட்டிமையார்
2. இரும்பனை வெண்தோடு மலைந்தோன் அல்லன் - கோவூர்க்கிழார்
3. குழவி இறப்பினும் ஊன்தடி பிறப்பினும் - சேரன் கணைக்காலிரும்பொறை
4. ஒருநாள் செல்லலம் இருநாள் செல்லலம் - ஓளவையார்
5. அற்றைத் திங்கள் அவ்வெண் நிலவில் - பாரி மகளிர்

திருக்குறள் - 3 அதிகாரங்கள் - 1. கல்வி, 2. ஈகை, 3. அன்புடைமை.

நாலடியார் (5 பாடல்கள் - 8, 19, 21, 36, 65)

1. செல்வம் நிலையாமை - செல்வர்யாம் என்றுதாம் செல்வுழி எண்ணாத
2. இளமை நிலையாமை - மற்றறிவாம் நல்வினை யாம்இளையம் என்னாது
3. யாக்கை நிலையாமை - மலைமிசைத் தோன்றும் மதியம்போல் யானை
4. அறன் வலியுறுத்தல் - இன்றுகொல் அன்றுகொல் என்றுகொல் என்னாது
5. சினமின்மை - இளையான் அடக்கம் அடக்கம் கிளைபொருள்

அலகு - 4:

நெடுநல்வாடை (முழுவதும்).

அலகு - 5:

இலக்கிய வரலாறு - எட்டுத்தொகை, பத்துப்பாட்டு நூல்கள், பதினெண் கீழ்க்கணக்கு நூல்கள், மொழிபெயர்ப்பு.

குறிப்பு: ஐந்து அலகுகளிலும் சம அளவில் வினாக்கள் அமைதல் வேண்டும்.

பகுதி 'அ, ஆ'வில் இலக்கிய வரலாறும், பகுதி 'இ'யில் 5-வது வினா மொழிபெயர்ப்புப் பகுதியினைத் தந்து எழுதக் கூறுதல் வேண்டும்.

(வினாத்தாளில் பகுதி 'இ'யில் கட்டாயம் மொழிபெயர்ப்புப் பகுதி இடம்பெறல் வேண்டும்.)

பகுதி அ - $20 \times 1 = 20$

பகுதி ஆ - $5 - 5 \times 5 = 25$

பகுதி இ - $5 - 3 \times 10 = 30$ (5-ஆவது வினாவில் மொழிபெயர்ப்புப்பகுதி வினாவாகக் கேட்கப்பெறல் வேண்டும்.)

பாடநூல்

1. தமிழ் - நான்காம் பருவம் - தேசியக்கல்லூரி வெளியீடு.
2. இலக்கிய வரலாறு - தேசியக்கல்லூரி வெளியீடு.

கற்பித்தலின் பயன்கள்

1. ஐவகை நில அமைப்புகளைப் பற்றிய அறிவினைப் பெறுவர்.
2. சங்க கால மக்களின் வாழ்வியல் பற்றி அறிவர்.
3. மன்னர்களின் ஆட்சிச்சிறப்பு, கொடைச்சிறப்பு, வீரம் பற்றி உணர்வர்.

COURSE OBJECTIVES

The Learner will be able to

- a. communicate effectively and appropriately in real life situation;
- b. use English effectively for study purpose across the curriculum;
- c. develop interest in and appreciation of Literature;
- d. develop and integrate the use of the four language skills i.e. Reading, Listening, Speaking and Writing;
- e. revise and reinforce structure already learnt.

UNIT I:

1. At the College
2. On the Campus
3. Outside the Class
4. At the Post office
5. For Business and Pleasure
6. Review

UNIT II:

7. Are you Smart ?
8. Are You Creative?
9. Is it too hard to improve?
10. How to win ?
11. View Points
12. Snakes and Ladders
13. Yourself

UNIT III:

1. Birbal story- The loyal gardener
2. Hindu mythological story- The origin of coconut tree
3. A chinese story: The generous student
4. An African Story ; The Three Runners

UNIT IV:

5. The Golden place
6. The one – hundreth prince
7. The mouse Merchand

UNIT V:

8. When wishes come true – Rabindranath Tagore
9. The World and after
10. Julius Caesar

Text Books: 1. A Collection of Short stories, Department of English, National College, Trichy.
2. Creative English for Communication (2nd edition) by Krishnasamy and Sriraman. Published by Macmillan

ENGLISH THROUGH EXTENSIVE READING – U19E2

SEMESTER : II

ENGLISH LANGUAGE

COURSE : II

INSTRUCTION HOURS/WEEK : 4

CREDIT : 2

Course objectives:

The learner will be able to

1. develop interest in and appreciation of Literature;
2. develop and integrate the use of the four language skills i.e. Reading, Listening, Speaking and Writing;
3. integrate the skill of Reading a variety of texts.
4. use English effectively for study purpose across the curriculum

UNIT I

Excitement : Mack R. Douglas

Tight Corners : E.V. Lucas

UNIT II

Water – The Elixir of Life : C.V. Raman

Tree Speaks : C. Rajagopalachari

UNIT III

The Art of Telling Tales : April Hersey

A Job Well Done : Ruskin Bond

UNIT IV

The Panorama of India's Past : Jawaharlal Nehru

The Origin of Grammar : Margaret Bryant & Janet

UNIT V

Dangers of Drug Abuse : Hardin B. Jones

Crime and Punishment : R.K. Narayan

Text Book : Dr. Ananthan , R. Effective Communication. Ed. Chennai : Anu Chithra Pub.2010.

COMMUNICATIVE ENGLISH I – U19CE1

Semester : II
Instruction Hours/ Week : 2

Communicative English Course : I
Credit : 1

COURSE OBJECTIVES:

The Learner will be able to

1. communicate, to define, classify, and understand the methods of communication,
2. improve their LSRW skills,
3. enable them to practice those skills in their daily life by identifying instances of communication in the circumstances of their own.

UNIT I

Writing Stories

Grammar Components : Articles, Prepositions and Tenses

UNIT II

Precis Writing

Grammar Components : Non- Finite Verbs and Phrasal Verbs

UNIT III

Writing Letters

Grammar Components : Conjunctions and Interjections and Punctuation

UNIT IV

Reporting

Grammar Components : Reported Speech and Transformation of Sentences

UNIT V

Writing an Essay

Grammar Components : Sentence structure (S/V/O/C/A) and Simple, Compound and Complex Sentences

Text book : Pillai, Radhakrishna G. English Grammar & Composition Ed. Chennai : Emerald Pub.2016

ENGLISH FOR COMPETITIVE EXAMINATIONS – U19E3
SEMESTER : III
INSTRUCTION HOURS/WEEK : 6

ENGLISH LANGUAGE COURSE : III
CREDIT : 3

COURSE OBJECTIVES:

The Learner will be able to

1. have a knowledge in basic grammatical units of English
2. have a depth of knowledge in Concord, reconstructing passages and précis writing.
3. comprehend the given passage and understand it.
4. gain a good knowledge and understanding in vocabulary
5. write on his/her own on a given topic and gain a good skill in letter/report writing.

UNIT I:

Basics of English(Revision)

- (a)Parts of speech and Articles
- (b)Active and passive voice
- (c)Framing Questions
- (d)Tag questions
- (e)Indirect speech
- (f)Tenses

UNIT II:

- (a)Errors and how to avoid them
- (b)Spotting errors
- (c)Reconstructing passages
- (d)Précis writing

UNIT III:

Reading comprehension

UNIT IV:

- (a)Sentence completion,
- (b) Spelling
- (c)Vocabulary – Words often confused or Misused, Synonyms, Antonyms.

UNIT V:

Letter writing , Report writing ,Paragraph writing, Essay writing

Text book : English for Competitive Examinations by R.P.Bhatnagar&Rajul Bhargava
macmillanIndia ltd. Delhi.

READING POETRY AND DRAMA – U19E4

SEMESTER : IV

ENGLISH LANGUAGE COURSE : IV

INSTRUCTION HOURS/WEEK : 6

CREDIT : 2

COURSE OBJECTIVE:

The Learner will be able to

- a. appreciate a piece of poem and analyze it
- b. appreciate and interpret an one act play.
- c. use English effectively for study purpose across the curriculum;
- d. develop and integrate the use of the four language skills i.e. Reading, Listening, Speaking and Writing;
- e. revise and reinforce structure already learnt.

POETRY:

UNIT I : John Milton : On His Blindness

Oliver Goldsmith : The Village School Master

William Wordsworth : The Solitary Reaper

UNIT II : P.B.Shelly : Ozymandias

John Keats : La Belle Dame Sans Merci

Robert Browning : Incident of the French camp

UNIT III : John Masefield : Laugh and Be Merry

Robert Frost : Stopping by Woods On a Snowy

Evening

John Drinkwater : The Vagabond

DRAMA:

UNIT IV: Anton Chekov : A Marriage Proposal

Lady Gregory : The Rising of the Moon

UNIT V: W.St. John Tayleur : Reunion

William Shakespeare : Othello, The Moor of Venice – Act V

Text Books : 1)**An Introduction to Poetry** edited by A.G.Xavier; [Macmillan]

2)**A Book Plays:** A Group of Editors, Published by Orient Blackswan

SEMESTER : IV
INSTRUCTION HOURS/WEEK : 2

COMMUNICATIVE ENGLISH COURSE : II
CREDIT : 1

The learner will be able to

1. develop interest in and appreciation of Literature;
2. develop and integrate the use of the four language skills i.e. Reading, Listening, Speaking and Writing;
3. integrate the skill of Reading a variety of texts.
4. use English effectively for study purpose across the curriculum

UNIT I:

Enriching Vocabulary – Register Development; who is who; Synonyms, Proverbs

UNIT II:

Tense Forms with emphasis on differences between Present and Present Continuous; Past and Present Perfect , Framing questions, Auxiliaries, if clauses; conjunctions and linkers; Prepositions

UNIT III

Pronunciation, Good Pronunciation habits, Phonetic Transcription, Greetings, Farewells commands etc.,

UNIT IV:

Conversational Skills – Affirmative or Negative Language – idiomatic expressions, Phrases, Dialogue Writing,

UNIT V:

- Writing Skills – Note- taking, note- making, e-mail, Describing an object, narrating a story.
- Circulars
- Notes - reminders, warnings, farewells, apology.
- Draft invitations – marriage, annual day, inaugural functions of associations, valediction, seminar, workshop.
- Draft Short messages- compliments, birthday wishes, notifications
- Draft Posters- Slogans, Announcements
- Draft Advertisements
- Dialogue writing

Text Book

1. Communicative English by Department of English, National College(Autonomous), Trichy.

SYLLABUS
UG Part I – Hindi
Semester – 1

U19HI : Functional Hindi-1, Prose, Grammar And Translation – 1

Objectives :

Unit I : The Objective of teaching functional Hindi is to encourage the students to learn the functional words.

Unit II : The Objective of teaching grammar is to teach the basic grammatical structures.

Unit III : The Objective of teaching prose is to develop their language ability.

Unit IV : The Objective of teaching translation is to convey the original tone and meaning.

Unit V : The Objective of teaching short stories is to enhance their creative writing and spoken skills through story telling/story writing and story reading mode.

Program Outcome :

The learners will acquire the knowledge of basic letters and functional hindi words. They understand the grammatical structures and able to translate the sentences from source to target language. The learners can read and understand the prose and stories.

SEMESTER – I

COURSE CODE : U19H1

6hrs/wk

**Paper I – FUNCTIONAL HINDI-1, PROSE, GRAMMAR AND
TRANSLATION – 1**

Unit – I Functional Hindi

1. Directions, Seasons, Days, Colours
2. Fruits, Vegetables, Flowers, Numbers
3. Groceries, Grains, Taste, Cardinals
4. Domestic Animals, Wild Animals, Relatives, English Month
5. Occupation, Parts of Body, Numbers and Tamil Months

Unit – II Grammar

1. Noun
2. Verb
3. Pronoun
4. Vachan
5. Gender

Unit – III Prose

1. Challis karod kurta kaha se....
2. Bhojan Aur Vigyan
3. Dr. Abdul Kalam

Unit – IV Translation

1. (Hindi to English Lesson -1 to 5)

Unit – V Story

4. Raja Ka Chunaav – Ashok Kumar Kantha Bhatiya
5. Poos Ki Raat – Premchand

DEPARTMENT OF HINDI

For Candidates admitted from the Academic Year 2019 onwards

SEMESTER – 1

Course Code U19H1

Credits – 3

**Paper I – FUNCTIONAL HINDI-1, PROSE, GRAMMAR AND
TRANSLATION – 1**

PROSE

Prescribed Text Book

Bharat – Madhyama Patya Samgiri

O.No.1619 Hindi Prachar Pushtakmala, Madras.

Prescribed Lessons

1. Challis karod kurta kaha se....
2. Bhojan Aur Vigyan
3. Dr. Abdul Kalam

STORY

Vaani Hindi Patmala – Ashok kumar , kanta Bhatya

Oxford University Press ISBN-10:0-19-9469687

1. Raja Ka Chunaav – Ashok Kumar Kantha Bhatiya

Poos Ki Raat – Premchand

Grammar

Reference Book

Sugam Hindi Vyakaran - Prof.Vanshi Dhar and Dharmapal Shastri

Siksha Bharathi, New Delhi

ISBN-10:81-7483-037-5

Prescribed Portion

Noun, Verb, Pronoun, Vachan, Gender

Functional Hindi

Hindi Vataayan – Dr. K.M.Chandra Mohan

ISBN : 81-7124-223-5, Vishwa Vidhyalay Prakashan, Varanasi

Semester – II

U19H2 : Comprehension, Grammar – 2, Drama And Hindi Literature-1

Objectives :

Unit I : The Objective of teaching comprehension is to incorporate self-reading and understanding.

Unit II : The Objective of teaching grammar is to acknowledge the basic rules of the grammatical structures.

Unit III : The Objective of teaching Literature is to acquire the knowledge of the origin of Hindi in literature.

Unit IV : The Objective of teaching one act play is to help the learners to understand the method of acting and writing a play.

Unit V : The Objective of teaching Drama is to acknowledge the basic dramatic structures.

Program Outcome :

The Learners will be able to comprehend on their own and to improve their reading skills. The learners will be able to communicate accurately free of grammatical errors. The learners will get a widen knowledge of Hindi literature. The learners will understand various geners of literary works. The learners will get deep and broad vision of drama.

SEMESTER - II

COURSE CODE : U19H2

6hrs/wk

PAPER II – COMPREHENSION, GRAMMAR – 2, DRAMA AND HINDI LITERATURE-1

Unit – 1 Comprehension

1. Discipline
2. Humanity
3. Coeducation
4. Student Life
5. Importance of Hard work

Unit – II Grammar

1. Adjective
2. Adverb
3. Conjunction
4. Tense

Unit – III Hindi Literature

1. Aadi kaal (Introduction, Specialities, Famous Poets)

Unit – IV One act play

1. Reed ki Hadhi (Jagdeesh Chandra Mathur)
2. Andheri Nagari (Bharathendu Harischandra)

Unit – V Drama

1. Swarg ke Jalak (Upendranath Ashak)

DEPARTMENT OF HINDI

For Candidates admitted from the Academic Year 2019 onwards

U19H2

SEMESTER – II

PAPER II – COMPREHENSION, GRAMMAR – 2, DRAMA AND HINDI LITERATURE-1

Comprehension

Prescribed Text Book

**Adhunik Hindi Nibandhavali - Praveshika Book
Hindi Prachar Pushtakmala, Madras.**

Prescribed Lessons

1. Discipline
2. Humanity
3. Coeducation
4. Student Life
5. Importance of Hard work

One Act Play

Hindi Sahith Rastrabhasha patya saamgri

O.No.1636 Hindi Prachar Pushtakmala, Pushpa-507

1. Andheri Nagari – Bharatendu Harishchandra
2. Reed ki Haddi – Jagdish Chandra Mathur

Drama

Swarg ki Jalak – Upendranath Ashk

Grammar

**Sugam Hindi Vyakaran - Prof.Vanshi Dhar and Dharmapal Shastri
Siksha Bharathi, New Delhi
ISBN-10:81-7483-037-5**

Prescribed Portion

Adjective, Adverb, Conjunction, Tense

Hindi Literature

Aadi kaal (Introduction, Specialities, Famous Poets)

Prescribed Book

1. **Hindi Sahithya ki Pravirthiya – Dr. Jaykisan Prasad**

Semester – III

U19H3 : Dialogue Writing, Poetry, Translation -2 Hindi Literature-2

Objectives :

Unit I : The Objective of teaching couplet will give learners confidence and energetic.

Unit II : The Objective of teaching dialogue writing is to teach the learners about appropriate words and style in appropriate place.

Unit III : The Objective of teaching Bhakthi Literature is to acquire the knowledge of the origin of Bhakthi and its movement in Hindi literature.

Unit IV : The Objective of teaching Poetry is to make the learners to acquire the knowledge of the poets and their writings.

Unit V : The Objective of teaching Translation to the learners to get knowledge of translation from the source to target language. They also gain the knowledge of homonyms and synonyms in Hindi.

Program Outcome :

The Learners will understand the couplets and poetry by the prescribed units. The learners will come to know about the dialogue delivery and their usage in their daily life also they can translate from source to target language. They can understand the Bhakthi movement through Hindi Literature.

SEMESTER - III

COURSE CODE : U19H3

6hrs/wk

**PAPER – III DIALOGUE WRITING, POETRY, TRANSLATION -2
HINDI LITERATURE-2**

Unit – I Couplets

1. Couplets of Kabir
2. Couplets of Tulshi
3. Couplets of Rahim

Unit –II Dialogue Writing

1. Mother and Daughter
2. Teacher and Student
3. Between Two Friends
4. Brother and Sister
5. Customer and Shopkeeper

Unit – III Hindi Literature

1. Bhakthi Kaal (Introduction, Specialities, Famous Poets)

Unit – IV Poetry

1. Baghavan ke Dakiye (Ramdhari singh Dinakar)
2. Tera Sneh na kovoona (Sumitranandan Pant)
3. Kilona (Chiyaram Saran Gupta)

Unit – V Translation

1. English to Hindi (Lesson 1 to 5)
2. Homonyms
3. Synonyms

DEPARTMENT OF HINDI

For Candidates admitted from the Academic Year 2019 onwards

U19H3

SEMESTER – III

PAPER – III DIALOGUE WRITING, POETRY, TRANSLATION -2 HINDI LITERATURE-2

Couplets

Prescribed Text Book

Kavya Sourab - Hindi Prachar Pushtakmala, Pushpa- 437

O.No. 1242, Dakshin Hindi Prachar Sabha, Madras.

Prescribed couplet

- 1. Kabir – 5 dohas**
- 2. Tulsi – 5 dohas**
- 3. Rahim – 5 dohas**

Poetry

Prescribed Book

Vasanth III

Subodh Hindi Patmala – 3, Hindi Prachar Pushtakmala, Pushpa – 507, O.No.1636

Prescribed Poem

- 4. Baghavan ke Dakiye - Ramdhari singh Dinakar**
- 5. Tera Sneh na kovoona - Sumitranandan Pant**
- 6. Kilouna - Chiyaram Saran Gupta**

Dialogue Writing

Hindi Vataayan – Dr. K.M.Chandra Mohan

ISBN : 81-7124-223-5, Vishwa Vidhyalay Prakashan, Varanasi

Hindi Literature

Bhakthi Kaal (Introduction, Specialities, Famous Poets)

Prescribed Book

Hindi Sahithya ki Pravirthiya – Dr. Jaykisan Prasad

Translation

Subodh Hindi Patmala – 1

Hindi Prachar Sabha, Madras.

Prescribed Lessons

Lesson 6 to 10

Homonyms

Synonyms

Semester – IV

U19H4 : Letter Writing, General Essay, Hindi Literature-3

Objectives :

Unit I : The Objective of teaching letter writing is to improve their communication skills through writing letters in formal and informal way.

Unit II : The Objective of teaching Modern Era in Hindi literature to acquire the knowledge of various subjects which was used in pre independence and post independence and also in recent years.

Unit III : The Objective of teaching Street play is to introduce theatre arts and the origin of today's theatre.

Unit IV : The Objective of teaching Technical words and phrases is to develop their writing skill. Writing essay will develop their creativity. The learners were encouraged to summarise a passage through precise writing.

Unit V : The Objective of teaching Fiction is to acquire knowledge of a long story and their characteristics.

Program Outcome :

The Learners will able to draft and structure letters on their own. They come to know about the modern era in Hindi literature. They understand the role of street play in recent times. They can be aware of using technical words and phrases. Now they can understand the role of fiction by reading and get the knowledge of authors vision.

IV SEMESTER

Course Code: U19H4

6hrs/wk

PAPER IV- LETTER WRITING, GENERAL ESSAY,HINDI LITERATURE-3

Unit – I Letter Writing

1. Leave Letter
2. Placing Order for Books
3. Complaint Letter

Unit – II Hindi Literature

1. Modern Era (Introduction, Specialities, Famous Poets)

Unit – III Street Play

1. Aurat

Unit – IV

1. Technical Words
2. Technical Phrases
3. General Essay
4. General Essay
5. Precise Writing

Unit – V Novel

1. Kadiyan (Bhishma Sahani)

DEPARTMENT OF HINDI

For Candidates admitted from the Academic Year 2019 onwards

U19H4

SEMESTER – IV

**PAPER IV- LETTER WRITING, GENERAL ESSAY, HINDI
LITERATURE-3**

Letter Writing

Prescribed Letters

6. Leave Letter
7. Placing Order for Books
8. Complaint Letter

Street Play

Prescribed Book

Indra Gandhi Rashtriya Mukta Vishva Vidhyalay, New Delhi.

ISBN – 81-7605-844-0

Prescribed Play

Aurat

Hindi Literature

Modern Era (Introduction, Specialities, Famous Poets)

Prescribed Book

Hindi Sahithya ki Pravirthiya – Dr. Jaykisan Prasad

Prescribed Book

Hindi Vataayan – Dr. K.M.Chandra Mohan

ISBN : 81-7124-223-5, Vishwa Vidhyalay Prakashan, Varanasi

Prescribed Portion

4. Technical Words
5. Technical Phrases
6. General Essay
9. General Essay
10. Precise Writing



NATIONAL COLLEGE (AUTONOMOUS)
LANGUAGE COURSE PART I SANSKRIT SEMESTER I PAPER I SANSKRIT I
(For the candidates admitted from June 2019 onwards)

SYLLABUS

SUBJECT CODE:U19S1

Unit I

संस्कृतभाषा देवनागरीलिपिः च - परिचयः
कर्तृपद-परिचयः

- १। संस्कृत भाषा - प्रास्ताविकम्
- २। अक्षराभ्यासः, वर्णाः,
- ३। स्वराः, व्यञ्जननि, संयुक्ताक्षराणि, लेखनप्रकारः च
- ४। अकारन्त-शब्दाः
- ५। लिङ्गत्रयम्
- ६। वचनत्रयम्
- ७। विभक्तयः
- ८। अनुवाद-अभ्यासः
- ९। आङ्गल/तमिल् भाषायां संस्कृतात्
- १०। संस्कृते आङ्गल/तमिल् भाषातः

Unit II

क्रियापदानि (परिचयः)

1. वर्तमानकाले (लट्) धातवः

- १। अन्यपुरुष/प्रथमपुरुष;मध्यमपुरुष;उत्तमपुरुषः च
- २। एकवचनम्, बहवचनं च
- ३। क्रियापदानि - गम् (गच्छ), पिब्,पठ्, क्रीड्, वद्

2. पुल्लिङ्ग-कर्तृपदानि
सर्वनामपदानि च

- १। बालकः, शिक्षकः, अध्यापकः, नृपः, देवः, मनुष्यः,
हस्तः अलसः कुशलः, अहम् ,त्वं, सः।

3. नपुंसक-लिङ्ग-कर्तृपदानि

- १। पुस्तकम्, फलम्, दुग्धम्, घृतम्, उद्यानम्, पुष्पम्,
जलम्, मधुरम्, कन्दुकम्, भोजनम्।

4. अव्ययानि

- १। तत्र, कुत्र, यत्र, अत्र, न, तदा, कदा, यदा-तदा,
शीघ्रं, द्रुतम्, सत्त्वरम्, पश्चात्, अपि, सह, अतः
साकम्, सार्धम्, समं, एव, तावत्, तु, यदि-तर्हि,
सदा।

5. अन्ये अकारान्त-कर्तृपदानि

- १। सूर्यः, सायंकालः, प्रकाशः, वृद्धः, सत्यं, असत्यं,
विद्यालयः, गृहम्, जलम्, दुग्धम्, मधुरम्, भोजनम्

Unit III

1. अनुवाद-अभ्यासः

2. विभक्तीनां परिचयः

3. प्रश्न-निर्माण-पदानि

4. क्रियापदानि(लट्)

5. अनुवाद-अभ्यासः

उपर्युक्त-कर्तृ-क्रियापदानि वाक्येषु उपयोगः,
अनुवाद-अभ्यासः च।

१। प्रथमा विभक्तिः - संबोधनप्रथमा-विभक्तिपर्यन्तं
विभक्ति-अन्तानां परिचयः ,

२। विभक्ति-अन्तानां प्रत्ययैः आदेशाः

३। तृतीया विभक्तिः - सह, साकं सार्धम्, समं

४। चतुर्थी विभक्तिः - षष्ठ्याः विभक्तेः कृते प्रत्ययः

५। विना इत्यादीनां अव्ययानां उपयोगः।

किम्, कुत्र, कथं, किमर्थम्, कुतः, कदा।

वर्तमानकाले

भू (भव्) अस्, धाव् , कृ (कर्) अस्, धाव्,

पत्, आ-गम् (गच्छ्)।

आङ्गलात् संस्कृते/ संस्कृतात् आङ्गले

Unit IV

1. विशेषण-विशेष्यौ

2. संख्यावाचकपदानि

3. सर्वनामपदानि

4. भविष्यत्काले क्रियापदानि (लृट् लकारः)

5. भोज्यपदार्थनामानि

१। रङ्गाः -शुक्ल-नील-पीत-रक्त-हरित-कपिश-
चित्र-भेदाः। तथा अन्यानि सरलपदानि

२। तेषां विशेषणेषु उपयोगः

१। संस्कृते संख्यावाचकपदानि (0 त। १०
पर्यन्तम्।

१। तद् शब्दः - पुल्लिङ्ग-स्त्रीलिङ्ग-
नपुंसकलिङ्गाः

२। अस्मद् - युष्मद् शब्दौ।

३। एतद् शब्दः - त्रिषु लिङ्गेषु

१। गम् (गच्छ्), पठ्, वद, पत्, लिख्, क्रीड्,
आ-गम्(गच्छ्), भू (भव्), धाव्, पा(पिब्),
दृश्(पश्य्), कृ (कर्)।

१। तेषां वाक्येषु उपयोगः।

२। अनुवाद-अभ्यासः।

३। वार्तालापः

Unit V

1. प्रत्ययाः
 - १। क्त-प्रत्ययः
 - २। तुमुन्नन्तः
 - ३। क्त्वा प्रत्ययः
 - १। अट्, भक्ष्, अर्च्, खेल्, चल्, धार्, कथ्, क्षाल्, पाल्, तुल्, मार्, घर्ष्, तोष्, गण्, ।
 - १। कृषीवलः इति पाठः।
 - २। नूतन-क्रियापदानि -क्री, वि-क्री, सिच्, रुह्, वर्ष्, रुह्, रच्, निस्ज्-कस्, वस्, कृष्, मुच् ।
2. क्रियापदानि (लट् लकारे)
3. कृषि-संबन्धीनि पदानि
4. आकारान्त-स्त्रीलिङ्गः
 - १। आकारान्तः स्त्रीलिङ्गः माला शब्दः
 - २। समानान्त-पदानि।
 - ३। पदानां वाक्येषु उपयोगः
 - १। सवर्णदीर्घ-सन्धिः
 - २। गुणसन्धिः
 - ३। वृद्धिसन्धिः
 - ४। सन्धीनां वाक्येषु उपयोगः
 - ५। सन्धीनां अभ्यासः
5. सन्धिः (स्वरः)

Prescribed Book: Saral Sanskrit Sikshak Part I, Bharatiya Vidya Bhavan, Mumbai, 400007.

(Omitted portions: Lesson 1: Passage starting: रामो राजमणिः with the meaning.

Lesson 6,7: Passage for memory (Memorise) at the end.

Lesson 10 and Lesson 12: Full)

References:

Sanskrita Bodhini (Prathama), Sanskrita Bhasha Pracharini Sabha, Chittoor, Andhra Pradesh, 2011।

NATIONAL COLLEGE (AUTONOMOUS)
LANGUAGE COURSE PART I SANSKRIT SEMESTER II PAPER II SANSKRIT II
(For the candidates admitted from June 2019 onwards)

SYLLABUS
SUBJECT CODE: U19S2

Unit I

1. पुनश्चर्या

गतषाणंमासे अभ्यस्तानाम्

2. कर्तृपदानां परिचयः

१। इकारान्तः पुल्लिङ्गः कविशब्दः
केचन समानान्त-शब्दः च।

२। सर्वनामशब्दः - तद् - स्त्रीलिङ्गे

३। इकारान्तः स्त्रीलिङ्गः मतिशब्दः,
केचन समानान्त-शब्दाः च।

४। एतेषां वाक्येषु उपयोगः, अनुवाद-अभ्यासः च।

3. क्रियापदानि

वर्तमानकालः (लट्)

१। जप्, चर, रक्ष, हस्, वम्, नम्, दह, तप्, वस्,
इच्छ, वाञ्छ, शंस्, त्यज्, जल्प, निन्द, क्षिप्।

२। वाक्येषु उपयोगः, अनुवाद-अभ्यासः च।

Unit II

1. भविष्यत्कालः (लृट्) नूतनक्रियापदानि

१। अर्ज्, दण्ड्, चिन्त्, ज्वल्, तर्ज्, तर्क्, तप्,
नट्।

1. नूतनकर्तृपद-परिचयः

१। इकारान्त पुल्लिङ्गः तथा स्त्रीलिङ्गपदानि
उपर्युक्त-क्रियापदानि च मिलित्वा वाक्येषु
उपयोगः

2. आत्मनेपदिनः धातवः (क्रियापदानि)

वर्तमानकाले (लट्)

१। यत्, लभ्, रम्, क्षम्, त्रप् सह, स्वद्, बाध्,
भाष्, भास्

२। पूर्वोक्त-कर्तृपदानि क्रियापदानि च वाक्येषु
उपयोगः

३। अनुवाद-अभ्यासः

3. आत्मनेपदिनः धातवः (लट् क्रियापदानि)

१। भाष्, यत्, लभ्, रम्, क्षम्, त्रप्, सह, स्वद्,
भास्

Unit III

1. भूतकालः (लङ्)

- १। सर्वेऽपि धातवः वर्तमानकाले कृताः।
- २। भूतकालक्रियापदानि वाक्येषु उपयोगः।
- ३। वर्तमानकालं भूतकालं च मिश्रित्य वाक्येषु उपयोगः।
- ४। वाक्येषु उपयोगः अनुवाद-अभ्यासः च।

2. प्रेरणार्थकं क्रियापदम् (भविष्यत्) लोट्

- १। सर्वेऽपि धातवः ये वर्तमानकाले तथा भूतकाले कृताः।
- २। प्रेरणार्थकक्रियापदानि च वाक्येषु उपयोगः पूर्ववत् (मध्यमपुरुष-एकवचनमात्रम्)
- ३। अनुवाद-अभ्यासः

Unit IV

1. सन्धिप्रकरणम्

- १। यण् सन्धिः
- २। अयादिसन्धिः

2. नूतन-कर्तृपदानि (पुल्लिङ्गः)

- १। उकारान्तः पुल्लिङ्गः गुरु शब्दः
- २। समानान्त-शब्दा केचन।
- ३। उकारान्त-पदानि वाक्येषु उपयोगः
- ४। अनुवाद-अभ्यासः
- ५। संख्यावाचकपदानि १ - २५ संस्कृते।

३। नूतन-कर्तृपदानि (स्त्रीलिङ्गः)

- १। उकारान्तः स्त्रीलिङ्गः धेनु शब्दः
- २। समानान्तक-शब्दाः केचन।
- ३। उकारान्त-पदानि स्त्रीलिङ्गे उपयोगः
- ४। अनुवाद-अभ्यासः
- ५। पुल्लिङ्ग-स्त्रीलिङ्ग-पदानि मिश्रित्य वाक्येषु उपयोगः ।

4. कथालेखनम्

१। पाठ्यक्रम-अन्तर्गत-कथा

२। नूतन-कर्तृपदानि (कथा-अन्तर्गतानि)

Unit V

1. नूतन-प्रत्ययाः

१। क्तवतु प्रत्ययः- क्तप्रत्ययः

२। कर्तरि प्रयोगः कर्मणि प्रयोगः च

३। सन्नन्ताः - इच्छाप्रकृतिः(Desiderative)

2. नूतन-क्रियापदानि

१। प्रथ्, प्री, बन्द्, भूष्, मृज् (मार्ज्), युज्,

रच्, स्निह्, हिंस् (लट् परस्मैपदि, आत्मनेपदि)

२। उपरि अभ्यसित-धातु तथा प्रत्ययान् वाक्येषु
उपयोगः

३। संभाषणम् - कालिदासकृतं अभिज्ञानशाकुन्तलम्।

Prescribed Book: Sarala Sanskrit Sikshak Part II, Bharatiya Vidya Bhavan,
Mumbai 400007.

(Omitted portions: 1. Lesson 2: श्लोकाः (pages 14, 15)

2. Lesson 4, श्लोकः (page 23)

3. Lesson 10, सुभाषितानि, संस्कृत-लोकोक्तयः)

References:

1. संस्कृत-व्यवहार-साहस्री, Samskrita Bharati, Bengaluru 560085.

2. संस्कृतबोधिनी, प्रथमा, संस्कृतभाषाप्रचारिणि सभा, चित्तूर, आन्ध्रप्रदेश ५०७५०९
संवत्सरः - २०११

NATIONAL COLLEGE (AUTONOMOUS)
LANGUAGE COURSE PART I SANSKRIT SEMESTER III PAPER III SANSKRIT III
SYLLABUS
SUBJECT CODE: U19S3

Unit I

- १। पुनश्चर्या
- २। पशु-पक्षि-वृक्ष-वर्ग-शलाटुका-फल-नामानि
- ३। वाणिज्य-उपयोगि-पदानि
मापनं तोलनं च
- ५। संख्यावाचकपदानि
- ६। संवत्सरनामानि
- ७। सस्यादि नामानि
- ८। धन/धनपत्र/नाणक नामानि
- ९। इदं शब्दः - पुंनपुंस्त्रीषु।
- १०। अनुवाद अभ्यासः

Unit II

- १। क्रियापदानि
लोट् लकारे परस्मैपदि, आत्मनेपदि च
- २। इतोऽपि अव्ययानि
- ३। कथालेखनप्रकारः
- ४। अनुवादः
- ५। उपसर्गाः
- ६। तेषां वाक्येषु उपयोगः

Unit III

- १। ईकारान्त-स्त्रीलिङ्गपदानि
नदी, अटवी, कौमुदी, वाहिनी, नगरी
इत्येतानि पदानि, तेषां शब्दरूपानि च
- २। क्रियापदानि, परस्मैपदिनः
- ३। आत्मनेपदिनः
- ४। उभयपदिनः
- ५। शरीर-अङ्गनामानि, भूषण-नामानि
- ६। ऋकारान्तःपुल्लिङ्ग-शब्दाः कर्तृ, पितृ,
इत्यादयः
- ७। क्रियापदानि
- ८। अनुवाद-अभ्यासः

Unit IV

- १। कृषिकर्म
- २। कृषिसंबन्धीनि उपकरणानि
- ३। अनुवाद-अभ्यासः
- ४। ल्यबन्ताः
- ५। वाक्येषु उपयोगः
- ७। विधिलिङ् (optative/potential mood)-1
- ८। परस्मैपदि आत्मनेपदि च

Unit V

- १। नकारान्तः पुल्लिङ्गः राजन् शब्दः
- २। सन्धिप्रकरणम् - पुनश्चर्या
- ३। विसर्गसन्धिः
- ४। नूतन-अव्यय-पदानि
- ५। अनुवाद-अभ्यासः
- ६। विधिलिङ् (optative/potential mood)-2
- ७। भोजनवेला - संवादः
- ८। नूतन-कर्तृ-क्रिया-अव्यय-विविध-प्रत्यय-पदानि ।
- ९। शब्दरूपाणि, धातुरूपाणि च पुनश्चर्या ।

Prescribed books: 1. Saral Sanskrit Sikshak, Part III, Bharatiya Vidya Bhavan, Mumbai 400007.

Omitted portions:1. Lesson 9 सीतायाः स्वयंवरः

2. Lesson 11, सुभाषितानि, संस्कृत-लोकोक्तयः

References:

1. Samskrita-vyavaharasahasri, Samskrita Bharati, Bengaluru 85
2. Anjala-samskrita kosha, Samskrita Bharati, Bengaluru 85.

NATIONAL COLLEGE (AUTONOMOUS)
LANGUAGE COURSE PART I SANSKRIT SEMESTER IV PAPER IV SANSKRIT IV
SYLLABUS
SUBJECT CODE: U19S4

Unit I

- १। प्रथम-षाण्मासिक, द्वितीय-षाण्मासिक, तृतीय-षाण्मासिक-अभ्यस्तानां विषयाणां पुनश्चर्या
- २। सर्व-शब्दः त्रिषु लिङ्गेषु।
- ३। वाच् शब्दः स्त्रीलिङ्गेषु
- ४। अनुवाद-अभ्यासः
- ५। हिमालयः - रचनालेखनम्

Unit II

- १। ओकारान्तः स्त्रीलिङ्गः गो शब्दः
- २। गो-संबन्धीनि पदानि
- ३। गां अधिकृत्य लेखः
- ४। नूतन-कर्तृ-क्रियापदानि - शब्दसंग्रहः
- ५। अनुवाद-अभ्यासः
- ६। पदानां वाक्येषु उपयोगः

Unit III

- १। समासः - उपोद्घातः
- २। तत्पुरुष-समासः
- ३। कर्मधारय-समासः
- ४। बहुव्रीहि-समासः
- ५। द्वन्द्व-समासः
- ६। द्विगु-समासः
- ७। अव्ययीभाव-समासः
- ८। एकशेषसमासः

संस्कृतम् - दैनन्दिनव्यवहारः

1. संस्कृत-व्यवहारः

- १। संख्यावाचकपदानि २५ तः ५० पर्यन्तम्।
- २। बन्धुवर्गनामानि
- ३। गृहे उपयुक्तानां वस्तूनां नामानि
- ४। वासर-तिथि-पक्ष-मास-नामानि
- ५। दैवत-ग्रहाणां नामानि

UNIT IV

1. रचनात्मकं कार्यम्

- १। पत्रलेखन- उपोद्घातः, उदाहरणानि च
- २। पिता/माता - पुत्राय/पुत्र्यै
- ३। पितरं/मातरं प्रति - पुत्रः/पुत्री
- ४। मित्राय पत्रम्
- ५। पतिः/पत्नी - पत्न्यै/पत्ये

2. अनुच्छेदः

- १। दत्तं अनुच्छेदं पठित्वा उत्तरलेखनम् - प्रकारः
- २। सरल-कथायुक्तम्, सरल-गद्यांशयुक्तम् च।

3. अनुच्छेदलेखनम्

- १। दत्तानि पदानि विचित्य पञ्चवाक्येषु एकम् अनुच्छेद-लेखनम्।
- २। सरलकथा अथवा गद्यांशयुक्तम्।

4. रचनालेखनम् (पाठ्यपुस्तक-अन्तर्गतम्)

- १। सरलकथा
- २। गद्यांशः

UNIT V

1. श्रेष्ठभाषा द्रविडभाषा - अस्याः ऐतिहासिकं स्थानम्।

- १। भाषायाः स्थापनम्
- २। भाषा-समूहः
- ३। श्रेष्ठभाषायाः गुणानि।
- ४। श्रेष्ठभाषाः
- ५। भारतीय-श्रेष्ठ-भाषे - द्रविड-संस्कृते
- ६। द्रविडभाषायाः पुराणत्वम्।
- ७। द्रविडभाषां श्रेष्ठभाषा-समूहे योजयितुमान्दोलनम्।
- ८। विश्व-श्रेष्ठद्रविडभाषा सम्मेलनम् २०१०

Prescribed Book: Sarala Sanskrit Sikshak Part IV, Bharatiya Vidya Bhavan,
Mumbai 400007.

(Omitted portions:

Lesson 2: विद्याप्रशंसा, Lesson 7: लङ्कातः यदा हनूमान् प्रतिनिवृत्तः Lesson 8: रामस्य वनगमनम्
Lesson 12: नलदमयन्ती-वर्णनम् Lesson 13: किङ्करैः पश्य किं कृतम् Lesson 14: रूपाणि
Lesson 15: सुभाषितानि Lesson 17: लोकोक्तयः।)

References:

1. संस्कृतव्यवहारसाहस्री, संस्कृतभारती, बेङ्गलूरु ५६००८५।

2. संस्कृतबोधिनी (द्वितीया), संस्कृतभाषाप्रचारिणी सभा, चित्तूर, आन्ध्रप्रदेशः ५१७५०१।

PROGRAMMING IN C

COURSE OBJECTIVES

- ✓ The course is designed to provide an extensive study of the C programming language.
- ✓ This course is emphasized the strengths of C which provides students to write a program efficiently.
- ✓ This course is offered to design the wide variety of examples and applications in C language.
- ✓ This course is underlined to learn some other programming languages and how to choose the particular programming language for solving the problem.

COURSE OUTCOME

Upon successful completion of this course, students will be able to

CO1: Understand the fundamentals in C programming.

CO2: Develop knowledge to write, compile and debug C program.

CO3: Explain identifiers, operators, type conversion and other features of C language.

CO4: Understand different data types in C language.

CO5: Demonstrate the control statements like decision making and looping.

CO6: Illustrate the concepts of functions, arrays and strings.

CO7: Understand the concept of pointers and Structures.

CO8: Use different data file structures and unions.

CO9: Study the complexity of problems, modularize the problems into small modules and then convert them into programs.

UNIT – I

History of C – Importance of C – Basic structure of C Program – Data types – Declaration of variables – Declaration of storage class - Operators and Expressions – Built –in Functions.

UNIT – II

Managing Input and Output operations – Decision making and branching (IF, IF-ELSE, ELSE – IF Ladder, SWITCH, GOTO) - Decision making and looping (WHILE, DO – WHILE, FOR, BREAK and CONTINUE).

UNIT – III

User-defined Functions: Introduction, Elements of User-defined Functions – Definition of functions – Return values and their types – Function call – Function declaration – Category of functions – No arguments and no return values – Arguments but no return values - Arguments with return values – No arguments but return a value – Functions that return multiple values – Recursion – The scope, visibility and lifetime of variables – Arrays – Passing arrays to functions – Table of strings – String handling functions.

UNIT – IV

Pointers: Introduction – Declaring pointer variables – Initialization – Accessing a variable through its pointer – Pointers and arrays – Pointer and character strings — Arrays of Pointers – Pointers to Functions – Structures and Unions: Introduction – Defining a structure – Declaring a structure variable – Accessing structure members – Structure initialization– Pointers and structures - Unions.

UNIT – V

File management in C: Introduction – Defining and opening a file – Closing a file – Input/Output operations on files – Random access to files – Bitwise Operations – The preprocessor: Introduction – Macro substitutions.

Text Book:

1. E. Balagurusamy, "*Programming in C*", 4th Edition, Tata McGraw Hill Publications.
UNIT I: Chapter 1 Sections 1.1, 1.2, 1.8 Chapter 2 Sections 2.7 – 2.9 Chapter 3 Sections 3.1 – 3.12, 3.14, Appendix III
UNIT II: Chapter 4 Sections 4.1 – 4.5 Chapter 5: Sections 5.1 – 5.9 Chapter 6 Sections 6.1 – 6.5
UNIT III: Chapter 9 Sections 9.1, 9.4 – 9.14, 9.16, 9.19 Chapter 7 Sections 7.1 – 7.7 Chapter 9 Section 9.17 Chapter 8 Section 8.9, Chapter 8 Section 8.8
UNIT IV: Chapter 11 Sections 11.1, 11.4 – 11.6, 11.10 - 11.12, 11.15,
Chapter 10 Sections 10.1 – 10.5, 10.12 Chapter 11 Section 11.16.
UNIT V: Chapter 12 Section 12.1 – 12.4, 12.6, Appendix I, Chapter 14 Sections 14.1, 14.2

Reference Books:

1. Byron S. Gottfried, "*Programming with C*", 2nd Edition, Schaum's outline series, Tata McGraw Hill Publications.
2. Mullish Cooper, "*The Spirit of C*", 4th Edition, Schaum's Outline Series, Tata McGraw Hill Publications.
3. T. Jeyapoovan, "*A first course in Programming with C*", Vikes Publishing House Pvt. Ltd, New Delhi.

PROGRAMMING IN C LAB

COURSE OBJECTIVES

- ✓ The course gives hands- on experience on C programming and improves the practical skill set.
- ✓ This course demonstrates the learners to develop the logic for the given problem recognize and understand the syntax and construction of C program.
- ✓ This course involved in compiling, linking and debugging C program and to develop some complex programs.

COURSE OUTCOME

Upon successful completion of this lab Course, student will be able to

- CO1** Understand the basic concept of C Programming and its different modules.
- CO2** Acquire knowledge about the basic concept of writing, compile and debug C program
- CO3** Demonstrate the role of identifiers, operators, type conversion
- CO4** Explain the control statements like decision making and looping to solve problems associated with conditions and repetitions.
- CO5** Explain the role of Functions involving the idea of modularity.
- CO6** Understand the concept of Array and pointers dealing with memory management.
- CO7** Use the structures and unions through which derived data types can be formed.
- CO8** Understand the file handling for permanent storage of data.

Program to implement the following concepts

1. Control statements
2. Looping structures
3. Functions
4. Arrays
5. String manipulations
6. Structures
7. Application
8. Debugging

C++ AND DATA STRUCTURE

COURSE OBJECTIVES

- ✓ To get a clear understanding of object-oriented concepts through C++.
- ✓ To design and implementation of various basic and advanced data structures.

COURSE OUTCOME

Upon successful completion of this course, Student will be able to

- CO1** Gain the basic knowledge on Object Oriented concepts.
- CO2** Develop applications using Object Oriented Programming Concepts
- CO3** Explain class structures as fundamental, modular building blocks
- CO4** Describe the concept of function overloading, operator overloading, virtual functions and polymorphism.
- CO5** To learn how to implement constructors and class member functions.
- CO6** Understand the role of inheritance, polymorphism, dynamic binding and generic structures in building reusable code.
- CO7** Be familiar with basic techniques of algorithm analysis
- CO8** Master the implementation of linked data structures such as linked lists and binary trees
- CO9** Ability to describe stack, queue and linked list operation.
- CO10** Be familiar with several sub-quadratic sorting algorithms including Selection sort, Merge sort and Heap sort

Unit-1:

Principles of Object Oriented Programming – Software Evolution – Basic Concepts of Object Oriented Programming – Benefits of OOP – Applications of OOP – Structure of C++ Program – Tokens – Keywords – Identifiers and Constants – Basic Data Types – User Defined Data Types – Derived Data Types – Declaration of Variables – Operators – Manipulators – Expressions and their types – Control Structures.

Unit-II:

Classes and Objects – Specifying a Class – Defining Member Functions – A C++ program with Class – Static Data Members – Static Member Functions – Arrays of Objects – Objects as Function Arguments – Friendly Functions – Returning Objects.

Constructors and Destructors – Constructors – Parameterized Constructors – Multiple Constructors in a Class – Copy Constructors – Destructors – Operator Overloading– Rules for Overloading Operators - Overloading Unary Operators.

Unit-III

Inheritance: Extending Classes – Defining Derived Classes – Single Inheritance – Multilevel Inheritance – Multiple Inheritance – Virtual Base Classes – Pointer, Virtual Functions and Polymorphism.

Unit-IV

Data Structures - Stack: Introduction to stack - Primitive operations on stack - Queues: Introduction to queues - Primitive operation on queues - Linked List: Introduction to Linked List - Operations such as Traversal, Insertion, Deletion and Searching

Unit-V:

Trees: Introduction to trees - Terminology in trees - Traversal of binary trees - Binary Search Tree - Binary Tree: Introduction – Representation of Binary Tree - Sorting: Insertion Sort – Selection sort – Merge Sort – Heap Sort.

Text Books:

1. E.Balagurusamy, “Object–Oriented Programming with C++”, 4ndEdition, 2008.
2. “Fundamentals of Data Structures” – Ellis Horowitz and Sartaj Sahni

C++ AND DATA STRUCTURE LAB

COURSE OBJECTIVES

- ✓ To provides hands-on for C++ & DS programs using C++ language

COURSE OUTCOME

Upon successful completion of this course, Student will be able to

- CO1** Tell about the object oriented concepts
- CO2** Discuss the execution of the C++ program using control structures, classes and objects
- CO3** Develop the know
- CO4** Demonstrate constructor, Operator Overloading and Inheritance
- CO5** Introduce the concept of data structures including List, Stack, Queues.
- CO6** To develop knowledge of applications of data structures including the ability to implement algorithms for the creation, insertion and deletion
- CO7** Demonstrate a thorough understanding of arrays by designing and implementing programs that search and sort arrays.

Program to implement the following concepts

1. Class and object
2. Functions using
 - (i) Call by value
 - (ii) Call by reference
 - (iii) Recursive call
3. Constructor and its types
4. Operator Overloading
5. Inheritance
6. To perform Stack operation using Array
7. To perform Queue operation using Array
8. To Create, Insert & Delete a Node using Singly Linked List
9. To find an element using Linear Search and Binary search.
10. To perform the following Sorting:
 - (i) Bubble sort
 - (ii) Quick sort.
 - (iii) Selection sort.

WEB PAGE DESIGNING USING HTML

COURSE OBJECTIVES

To get a clear understanding principles of creating an effective web page through HTML.

COURSE OUTCOME

Upon successful completion of this course, Student will be able to

- CO1** To apply markup languages for processing, identifying, and presenting of information in web pages.
- CO2** To learn scripting languages and web services to transfer data and add interactive components to web pages.
- CO3** Insert a graphic within a webpage
- CO4** Create a link within a webpage
- CO5** Insert heading levels within a webpage
- CO6** Insert ordered and unordered list within a webpage
- CO7** Create and view a webpage.

UNIT I

Introduction to HTML- Designing a Home page- History of HTML- HTML Generations- HTML Documents- Anchor Tag-Hyper Links.

UNIT II

Header Section- Title- Prologue- Links- Colorful Web Page- Comment Lines- Designing the Body Sections- Heading printing- Aligning the headings- Horizontal rule- Paragraph.

UNIT III

Tab Settings- Images and Pictures- Embedding PNG Format Images- Lists- Unordered Lists- Ordered Lists- Nested Lists.

UNIT IV

Tables- Table Creation in HTML- Width of the Table and Cells- Cells Spanning Coloring Cells- Column Specification- Style Sheets- Defining Styles- Elements of Styles Linking a Style Sheet to an HTML document- In-line Styles- External Style Sheets- Internal Style Sheets- Multiple Styles.

UNIT V

Frames-Frameset Definition- Frame Definition- Nested Frameset- Forms- Action Attribute- Method Attribute- Enctype Attribute- Drop Down List.

Text Book:

C.Xavier, "World Wide Web Design with HTML", Tata McGraw Hill, New Delhi,2010.

Unit 1: chapter 4(sec 4.1-4.6)

Unit 2: chapter 5(sec 5.1-5.6) chapter 6(sec 6.1,6.3)

Unit 3: chapter 6(sec 6.4-6.7) chapter 7(sec 7.1, 7.2, 7.4, 7.5)

Unit 4: chapter 8(sec 8.1-8.6)

Unit 5: chapter 9(sec 9.1-9.7)

Reference Book:

Joel Sklar, "Web Design Principles" Vikas Publications 2000.

DATABASE MANAGEMENT SYSTEM

COURSE OBJECTIVES

The course is designed to provide a wide knowledge on Database System and SQL. This course is emphasized the strengths of SQL and PL/SQL which provides students to write programs efficiently. This course provides the knowledge to design and build a simple database system and demonstrate competence with the fundamental tasks involved with modeling, designing, and implementing a DBMS.

COURSE OUTCOME

Upon successful completion of this course, students will be able to

- CO1** Understand the features of Database Management Systems and Relational database.
- CO2** Recognize the Data models.
- CO3** Study about the File Organization and Addressing Schemes.
- CO4** Learn about Relational Datastructure.
- CO5** understand the functional dependencies and design of the database
- CO6** Apply normalization techniques to normalize the database
- CO7** Understand the features Structured Query Language (SQL) and learn SQL syntax
- CO8** Understand the concept of PL/SQL
- CO9** Study about Exception Handlers in PL/SQL

UNIT I

Introduction: Flat File – Database System – Database – Actionable for DBA – The Entity –relationship Model: The Entity Relationship Model – Data Models: Relational Approach – The Hierarchical Approach – #The Network Approach#.

UNIT II

Storage Structure: File Organization and Addressing Schemes – Sequential Organization –Indexed Sequential Organization – Direct Organization of File – Interface Indexing – Hashing Scheme of File Organization – Dynamic Hashing Technique – Insertion Scheme in Dynamic Hashing – B-Trees – Indexing Methods – Relational Data Structure: Introduction – Relations – Domains.

UNIT III

Normalization : Purpose of Normalization – Definition of Functional Dependence (FD) –Normal Forms – First Normal Form – #Second Normal Form# – Third Normal Form – Boyce Codd Normal Form (BCNF).

UNIT IV

Structured Query Language: Features of SQL – Select SQL Operations – Grouping the Output of the Query – Querying form Multiple Tables – Retrieval Using Set Operators – Nested Queries – T-SQL – Triggers and Dynamic Execution: Transact-SQL.

UNIT V

Procedural Language-SQL: PL/SQL Block Structure – PL/SQL Tables – Cursor Management and Advanced PL/SQL: Opening and Closing a Cursor – Processing Explicit Cursor – Implicit Cursor – Exception Handlers – Sub Programs in PL/SQL – #Functions# – Precaution While Using PL/SQL Functions – Stored Packages – Dropping Procedure, Function and Package – Triggers – Object-Oriented Technology.

#.....#self-study portion

Text Book

1. Rajesh Narang, Database Management Systems, PHI Learning Private Limited, New Delhi, Fourth Printing, 2009

UNIT I : Chapters 1,2 & 3

UNIT II : Chapters 4 & 5

UNIT III : Chapter 7

UNIT IV : Chapters 8 & 9

UNIT V : Chapters 10 & 11

Books for Reference

1. Alexis Leon and Mathews Leon, Essentials of Database Management Systems, Vijay Nicole Imprints Private Limited, 2006.

RDBMS LAB

COURSE OBJECTIVES

- ✓ The course is given hands-on experience on RDBMS and improves the practical skill set.
- ✓ This course is established the beginners to build up the logic for create and accessing the Database by using Queries.

COURSE OUTCOMES

Upon successful completion of this lab Course, student will be able to

- CO1** Understand the fundamentals of RDBMS Concepts.
- CO2** Develop knowledge to DDL, DML in SQL
- CO3** Use the concepts of Triggers and cursors.
- CO4** Demonstrate about the Normalization
- CO5** Use the concepts in PL/SQL
- CO6** Develop the sample examples like Banking System, Library Management, etc.

List of Programs

1. Data Definition Language (DDL) commands in RDBMS
2. Data Manipulation Language (DML) and Data Control Language (DCL)
3. High level language extensions with cursors
4. High level language extension with Triggers
5. Procedures and Functions

Course Objectives

- The student should learn fundamental components used in a Digital Computer which is essential for the programme.

Course Outcomes

CO1: Perform Number Conversions from one System to another System.

CO2: Identify the logic gates and their functionality.

CO3: Analyze the fundamentals of Boolean functions using various mapping and Mathematical methods.

CO4: Design basic electronic Circuits (Combinational Circuits).

CO5: Understand the concepts flip-flops, Counters and Registers.

Unit-1: Number Systems and Codes: Introduction to Number Systems-Types-Decimal, Binary, Octal, Hexadecimal- Conversion from one number system to others- Binary arithmetic operations: Binary Addition-Binary subtraction-Binary multiplication and division- 1's complement and 2's complement, The 9's and 10's Complements-Binary Codes : BCD codes- Excess-3 code-Gray code, Weighted Binary codes - ASCII code.

Unit-2: Logic Gates and Circuits: Boolean algebra and Logic gates- AND, OR, NOT, NAND and NOR gate-The Exclusive-OR gate – Application of XOR gate.

Unit-3: Boolean Algebra: Fundamentals of Boolean Algebra- Boolean functions- Laws and Theorems of Boolean Algebra- DeMorgan's theorems-Sum-of –Products-Karnaugh Map – Product-of –Sums simplification.

Unit-4: Combinational Logic Circuits: Introduction to combinational Circuits-Adders-Half-Adder and Full-Adder- Subtractors- Half and Full Subtractor-BCD Adder- Decoders and Encoders.

Unit-5: Sequential Circuits: Introduction-Flip-Flops: -RS Flip-Flop, D Flip-Flop, JK Flip-Flop, T Flip-Flop - Master-Slave Flip Flop- Counters – Asynchronous or Ripple Counter – Ring Counter – Shift Register.

Text Book:

“Principles of Digital Electronics”- Dr, K. Meena, PHI Learning Private Limited,2012.

Reference Books:

1. Morris Mano “Digital Design”, 4th Edition, Prentice Hall of India Ltd, 2008.
2. Thomas C. Bartee “Digital Computer Fundamentals” , 6th Edition, Tata McGraw Hill, New Delhi,2011

JAVASCRIPT & PHP

COURSE OBJECTIVES

- ✓ The course is designed to provide an general study of the Javascript programming.
- ✓ This course is accentuated the strengths of Javascript which provides students to write a program efficiently.
- ✓ This course is offered to design the wide variety of examples and applications in ASP.
- ✓ This course is emphasized to learn some other scripting programming languages.

COURSE OUTCOME

Upon successful completion of this course, students will be able to

- CO1** Understand the Introduction to Javascript.
- CO2** Develop knowledge to write Javascript program.
- CO3** Explain variables, functions, objects and other features of Javascript
- CO4** Understand different concepts of Windows and frames.
- CO5** Demonstrate the control in a form and validate the inputs.
- CO6** Illustrate the concepts PHP.
- CO7** Understand the Variables, Constants and Control structures.

UNIT – I

Introduction to Java Script: JavaScript's Role on the Web – A First JavaScript Program – Working with Variables, Functions: Variables – Defining Functions – Calling Functions – Understanding JavaScript Objects – Object Methods – Variable Scope

UNIT – II

Windows: The Window Object Model – Opening and closing Windows – Frames and Other Objects: Creating Frames – Using the TARGET Attribute – Nesting Frames – The NOFRAMES Tag

UNIT – III

Forms: Overview of Forms – The <FORM> Tag – Form Elements: Input Fields – Selection Lists – Multiline Text Fields – Validating a User's Input to a Form

UNIT – IV

PHP: Server side scripting Language: Basic syntax – Types – Variables – Constants – Expressions – Operators – Control Structures

UNIT – V

Classes and Objects – Sessions - Cookies.

Text Book:

1. Don Gosselin, "JavaScript Comprehensive" – Vikas Publishing house.
UNIT I: CHAPTER 1& 2 UNIT II: CHAPTER 5 UNIT III: CHAPTER 6
2. Steven Holzner "The PHP Complete Reference 5.2" – Tata McGraw – Hill Edition.
UNIT IV: Chapter 1(Sec 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7), Chapter 2
UNIT V: Chapter 4(Sec 4.1, 4.2, 4.3, 4.4)

Reference Books:

1. Steve Suehring, "JavaScript Step by Step", 2nd Edition, Microsoft Corporation
2. Ivan Bayross, HTML, DHTML, Java Script, Perl, CGI,BPB, Third Revis.
3. Steven Holzer "Spring into PHP5", Tata McCraw Hill Edition.

HTML, JAVASCRIPT AND PHP LAB

COURSE OBJECTIVES

- ✓ The course is given hands-on experience on HTML, Javascript and ASP and improves the practical skill set.
- ✓ This course is established the beginners to build understand the Structure of Scripting Languages.

COURSE OUTCOMES

- CO1** Upon successful completion of this lab Course, student will be able to
- CO2** Understand the fundamentals of HTML program.
- CO3** Develop knowledge to write and view the output of the HTML program.
- CO4** Use the role of function, frames and validation in Javascript.
- CO5** Understand the concept of PHP and write and view the simple examples.

HTML Lab

1. (a) Creation of Vertical Frameset.
(b) Creation of Horizontal Frameset.
2. Sending Mail.
3. Insertion of Image.
4. Application form Creation.
5. Creating an Advertisement for a Company.

Java Script Lab

1. Functions.
2. Frames.
3. Validation.

PHP

1. Develop a PHP program using controls and functions.
2. Develop a PHP program using session.
3. Develop a PHP program using cookies.

VISUAL PROGRAMMING

COURSE OBJECTIVES

This course introduces the fundamental programming skills using the Visual Basic Integrated Development Environment. Emphasis is on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level.

COURSE OUTCOMES

Upon successful completion of this course, students will be able to

- CO1** Design, create, build, and debug Visual Basic applications.
- CO2** Explore Visual Basic's Integrated Development Environment (IDE).
- CO3** Implement syntax rules in Visual Basic programs.
- CO4** Explain variables and data types used in program development.
- CO5** Write and apply procedures, subroutine, and functions to create manageable code.
- CO6** Write Windows applications using forms, controls, and events.
- CO7** Explain Data Grid Record set using SQL to manipulate data stores, retrieves and process the
- CO8** information.

UNIT – I

Introduction to Visual Basic – Integrated Development Environment (IDE) features – VB editor – customizing the IDE – Anatomy of a form – Working with form properties – setting form's Properties – Introducing form events & form methods.

UNIT – II

Variables in Visual Basic: Declaring variables – Data types – Null value, Error value, Empty value – The scope of a variable – Module level variables – constants – Creating your own constants – scope of a constant – converting data types – arrays –declaring arrays – fixed size arrays – dynamic arrays –preserve keyword –REDIM Writing code in Visual Basic: The anatomy of a procedure – subroutine and functions – language constructs: for, next, the while loop, select case, Exit statement, with structure.

UNIT – III

Selecting & using controls: Introducing standard controls – Command buttons –Text buttons – levels – option buttons –check boxes –frame controls –list boxes –combo boxes – Image objects – picture boxes – Timer – scroll bars – file system controls.

UNIT – IV

Introduction to Built in Active X Control: Tool bar – the tree view control – the List view control – the Image list control – common Dialog control – Status bar control – Rich textbox control – Menu Editor.

UNIT – V

DDE properties – DDE Events –DDE methods –OLE properties – Active X controlcreation and usage and Active X DLL creation and usage –Data Base Access – Datacontrol – Field control – Data Grid Record set using SQL to manipulate data – Open dataconnectivity (ODBC)

Text Books:

1. Mohammed. Azam, "Programming with Visual Basic 6.0" – VIKASpublishing House pvt. Ltd.2009

UNIT I: CHAPTER 1, 3

UNIT II: CHAPTER 4, 5

UNIT III: CHAPTER 2, 6

2. Dr.A. Murugan,Dr.K.Shymala and GrashaJacob"Visual Basic Programming"Margham Publications

UNIT IV: CHAPTER 8

UNIT V: CHAPTER 12,13

Reference Book:

1. Noel jerke,"Visual Basic 6:The Complete Reference",Tata McGraw – Hill Edition, 2008.

VISUAL PROGRAMMING LAB**COURSE OBJECTIVES**

To attain the knowledge in Visual Basic programming. To gain Knowledge about the DML, DDL Operations. To understand about RDBMS, Object Oriented Databases.

COURSE OUTCOMES

CO1 Describing the basics of design, create, build and debug Visual Basic applications.

CO2 Designing Windows applications using forms, controls, and events

CO3 Explaining variables and data types used in program development and also the arithmetic operations for displaying numeric output.

CO4 Structuring decision structures for determining different operations and loop structures to perform repetitive tasks.

CO5 Monitoring Visual Basic programs that will help to design projects on VB Programming.

CO6. Implementing one and two dimensional arrays for calculating, and displaying of data.

Visual Basic Programming Lab

Program to implement the following concepts.

1. Standard control
2. Control array of a command button
3. a) Geometric shapes control
b) Basic primitives
4. Timer control
5. ActiveX Control
6. Menu Editor
7. DataBound Control

Applied Physics for Computer Science II

Course objectives

- To introduce 8085 architecture and programming in assembly language.
- To introduce basic concepts of interfacing memory and peripheral devices to a microprocessor.
- To introduce serial and parallel bus standards.

Course Outcomes

CO1: Describe the architecture and organization of microprocessor along with instruction set format.

CO2: Describe modes and functional block diagram of 8086 along with pins and their functions.

CO3: List and describe memory and addressing modes. List, describe and use different types of instructions, directives and interrupts.

CO4: Develop assembly language programs using various programming tools.

CO5: Visit for more Learning Resources

UNIT – I

Evolution of Microprocessor –Single Chip Microcomputer–Microprocessor Applications– Programming– Digital Computers–Memory –Buses–Memory Addressing Capacity and CPU– Microprocessor Architecture–Intel 8085–Instruction Cycle–Timing Diagram

UNIT – II

Instruction Set of Intel 8085 – Instruction and Data Formats – Addressing Modes–Status Flag – Intel 8085 Instructions– Programming of Microprocessors – Assembly Language – Assemblers – Stack and Subroutine – Macro – Microprogramming.

UNIT – III

Assembly Language Programming – Simple Examples – Addition and Subtraction of Binary and Decimal Numbers – Complements – Shift – Masking – Finding the Largest and Smallest Number in an Array –Arranging a Series of Number –Sum of a Series of Numbers – Multiplication – Division – Multibyte Addition and Subtraction.

UNIT – IV

Peripheral Device and Interfacing – Address Space Partitioning – Memory and I/O Interfacing – Data Transfer Scheme – Interrupts of Intel 8085 – Interfacing Memory and I/O Device.

UNIT – V

I/O Ports – Programmable Peripheral Interface – Programmable Counter/Interval Timer – A/D Converter and D/A Converter – Microprocessor Applications – Delay Subroutine – 7 – Segment LED Display – Measurement of Electrical Quantities – Frequency Measurement – Microprocessor Based Traffic Control.

Text Book:

1. Badri Ram, “*Fundamentals of Microprocessor and Microcontrollers*”, 7th revised and Enlarge Edition, Dhanpat Rai Publications.

UNIT I : Chapter 1 Sections 1.2 – 1.5, 1.29, 1.9.1, 1.9.2, 1.10.1 , Chapter 3 Sections 3. 1– 3.3

UNIT II : Chapter 4 Sections 4.1 – 4.4, 4.6, Chapter 5 Sections 5.2, 5.5, 5.6, 5.14

UNIT III : Chapter 6 Sections 6.1 – 6.6, 6.9 – 6.18, 6.21 – 6.26, 6. 29 – 6.31, 6. 34

UNIT IV : Chapter 7 Sections 7.1 – 7.6

UNIT V : Chapter 7 Sections 7.7.1, 7.11, Chapter 8 Sections 8.2, 8.12, Chapter 9 Sections 9.1 – 9.3, 9.5.1, 9.8

Reference Books:

1. Romesh S. Gaonkar, “*Microprocessor Architecture Programming and Applications with the 8085/8080A*”, Wiley Eastern 1990
2. Barry B. Bray, “*The Intel Microprocessor*”, 6th Edition, Published by Prentice Hall of India, 2003.

Course Objectives

1. To give the fundamental knowledge about digital electronics principles.
2. To become familiar with the architecture and Instruction set of Intel 8085 microprocessor.
3. To provide practical hands on experience with Assembly Language Programming.

Course Outcomes

- CO1 : Understand and apply the fundamentals of Assembly Language Programming of Microprocessors.
- CO2 : Design and implement programs on 8085 microprocessor.
- CO3 : Design interfacing circuits with 8085.
- CO4 : Trouble shoot interactions between software and hardware.
- CO5 : Understand the concepts related to I/O and memory interfacing

List of Programs

Digital Electronics

1. Number Conversions
2. Verification of Logic gates
3. Boolean algebraic functions using Karnaugh map (K-Map)
4. Shift registers

Microprocessor Lab

5. To perform Addition and Subtraction of two 8-bit numbers.
6. To perform decimal addition of two 8-bit numbers and sum is 8-bit.
7. To search the largest and smallest data in an array using 8085 microprocessor.
8. Arranging an array of data in Ascending order.
9. Arranging an array of data in Descending order.
10. To find the sum of series of data array.

BASIC CONCEPTS OF COMPUTER SCIENCE

Course Objective

This course introduces the basic concepts of computer to the students who is not belonging to Computer Science stream. This course will give the knowledge about Secondary Storage Devices. This course will stress on fundamental parts Internet and the intranet, so that the students will have a basic concept for understanding and using other programming language.

Course Outcome

Upon successful completion of this course, students will be able to

- CO1** Understanding the concept of input and output devices of Computers and how it works and recognize the basic terminology used in computer programming.
- CO2** Explain the Secondary storage Devices and its types
- CO3** Demonstrate about the Software
- CO4** Understanding the basis of Data communication and computer Networks.
- CO5** Explain about Internet and WWW.

UNIT I: Introduction: Characteristics of Computers – The Evolution of Computers – The Computer Generations. Basic Computer Organization: Input Unit – Output Unit - Storage Unit – Arithmetic Logic Unit – Control Unit – The Central Processing Unit. Processor and Memory: The Main Memory.

UNIT II: Secondary Storage Devices: Sequential and Direct Access Devices – Magnetic Disk - Optical Disk – CD-ROM. Input-Output Devices: Input Devices: Keyboard – Point-and-Draw Devices – Data Scanning Devices – Electronic-card Reader. Output Devices: Monitors – Printers – Plotters. Computer Software: Types of Software.

UNIT III: Operating Systems: Main Functions of an Operating System. Business Data Processing: Data Processing – Data Storage Hierarchy – Standard Methods of Organizing Data – File Management System: File Types – File Organizations – Database Management System: Database Models.

UNIT IV: Data Communication and Computer Networks: Basic Elements of a Communication System – Data Transmission Modes – Data Transmission Speed – Data Transmission Media – Digital and Analog Data Transmission.

UNIT V: The Internet: Definition- Basic Services: Electronic Mail – File Transfer Protocol – Telnet - The World Wide Web. WWW Browsers – Uses of the Internet. Multimedia: Multimedia Computer System – Multimedia Components – Multimedia Applications.

Text Book:

1. Pradeep K. Sinha and Priti Sinha, "Computer Fundamentals", BPB Publications, 3rd Edition.
 - Unit 1: chapter (1, 2)
 - Unit 2: chapter (8, 9, 10)
 - Unit 3: chapter (14, 16)
 - Unit 4: chapter (17)
 - Unit 5: chapter (18, 19)

Reference Book:

1. V.Rajaraman and Neeharika Adabala, "Fundamentals of Computers", 6th Edition, PHI Learning Private Limited, 2014.

PROGRAMMING IN JAVA

Course Objective

This course aims at facilitating the student to understand the Object-Oriented programming concepts of Java towards developing Java based applications and hands on practices by applying the concepts of Database Connectivity.

Course Outcomes

On the successful completion of the course, students will be able to

- CO1 Explain the OOPs concept, Java tokens and operators and expression
- CO2 Explain and implement classes and object ,method overloading and overriding concept.
- CO3 Describe Implements interfaces, use exceptions , threads, collections, logs of Java for the given problem.
- CO4 Understand Concept of Thread, its life cycle and Thread Exception
- CO5 Define various types of Errors and Apply Exception handling using multiple catch statement
- CO6 understand and describe concept of streams, reading and writing
- CO7 understand Applet , Life cycle of Applet and develop simple applet.

UNIT – I

Benefits of OOPS – Java History – Java Features – Java Environment – Java Tokens – Constants – Variables – Data Types – Operators and Expressions – Decision Making and Branching – Decision Making and Looping.

UNIT – II

Classes and Objects – Constructors – Method Overloading – Static Members – Inheritance – Overriding Methods – Final Variables, Final Methods and Final Classes – Finalizer Method – Abstract Methods and Abstract Classes – Visibility Control – Arrays – Strings.

UNIT – III

Defining Interface– Extending Interfaces – Implementing Interfaces – Packages – Multithreaded Programming: Thread Life Cycle – Thread Exceptions – Thread Priority – Synchronization.

UNIT – IV

Types of Errors – Exceptions – Syntax of Exception Handling Code – Multiple Catch Statements – Using Finally Statements – Managing Input / Output Files in Java: Concept of Streams – Stream Classes – Character Stream Classes – Reading / Writing Characters – Reading / Writing Bytes – Handling Primitive Data Types – Random Access files.

UNIT – V

Event Handling Methods – Labels – Button Control – CheckBox Control – Radio Button Control – Choice Control – List Control – Flow Layout – Border Layout – Grid Layout– Menus – Mouse Events – Applets: Life cycle of an Applet – Development and Execution of a Simple Applet.

Text Books:

1. E. Balagurusamy, "Programming with JAVA", Tata McGraw Hill, New Delhi, 4 th Edition. (UNIT I,II,III&IV)
2. C. Muthu, "Programming with JAVA", Vijay Nicole Imprints Private Limited, Chennai, 2 rd Edition, 2011. (UNIT V)
UNIT I : Chapter 1 Sec.1.3,1.4 , Chapter 2 Sec. 2. 1, 2 .2 , 2 .9, Chapter 3 Sec 3.6, Chapter 4 Sec. 4.2 – 4.4,Chapter 5 Sec. 5.1 – 5.15,Chapter 6 Sec. 6.1 – 6.8,Chapter 7 Sec. 7.1 – 7.6.
UNIT II: Chapter 8 Sec. 8.5,8.7 to 8.9 ,8.11 – 8.16,8.18 Chapter 9 Sec. 9.1 – 9.9.
UNIT III:Chapter 10 Sec.10.2 – 10.5, Chapter 11,Sec. 11.1 – 11.10.Chapter 12 Sec. 12.5,12.7 – 12.9.
UNIT IV: Chapter 13 Sec. 13.1 – 13.6, Chapter 16 Sec. 16.2,16.3,16.5,16.11 – 16.13,16.15.
UNIT V: Chapter 9 Sections 9.4,9.6 – 9.11,9.13 – 9.15, Chapter 10 Sections 10.3,10.5,Chapter 8 Sections 8.2,8.4

Reference Books:

1. Herbert Schildt, "Complete Reference JAVA 2", Tata McGraw – Hill Publishing Company Ltd., 5 th Edition, 2009

PROGRAMMING IN JAVA LAB

Course Objective

This course aims at facilitating the student to practice and Implement the Object-Oriented programming concepts of Java towards developing Java based applications and hands on practices by applying the concepts of Database Connectivity.

Course Outcomes

On the successful completion of the course, students will be able to

CO1: Understand and implement the concept of class and objects.	Understand
CO2: Write Java programs for string manipulation.	Apply
CO3: Implement packages, access specifiers and interfaces in a program	Apply
CO4: Implement Program for Events handling.	Apply
CO5: Generate program for implementing Multithreading	Analyze
CO6: Write programs using Applet and AWT	Apply

List of Exercises :

1. Classes and Objects.
2. Inheritance
3. (a) Built-in package.
(b) User defined package
4. Vector Manipulation.
5. Exception handling.
6. Applet.
7. Multi Threading.
8. AWT components.

PC HARDWARE & TROUBLESHOOTING

Course Objective

This course is designed to enable the student to get a detailed knowledge of all the hardware components that makes up a computer and to understand the different interfaces required for connecting these hardware devices.

Course Outcomes

On the successful completion of the course, students will be able to

CO1: Explain the Hardware components and architecture	Understand
CO2: Explain the classification of Memory, Keyboard and mouse	Understand
CO3: Describe about various troubleshooting mechanism like BIOS, CD-Drive's, CMOS, etc.	Apply
CO4: Describe about various troubleshooting mechanism like Keyboard, Memory, Pointing device, Motherboard etc.	Understand
CO5: Explain about Power protection devices and Power supply management	Understand
CO6: Understand and Describe Installation process of Network/ modem	Apply
CO7: Understand and Apply installation of Peripheral devices	Apply

UNIT I

Introduction to Computer Hardware – Main System Unit - The Motherboard -Motherboard Components – #The Motherboard# – Architecture - Chipsets- Connectors on the Motherboard – The Processor/CPU – Architecture - Modern Microprocessors - Printer- Printer types - Hard Disk Drive- Floppy Disk Drive - CD-ROM Drive - DVD-Drive – Monitor – Monitor types – MODEM - Scanner.

UNIT II

Memory : Memory – Primary Memory – Secondary Memory – Bits & Byte – RAM – ROM – Parity – ECC Memory – Physical Memory Organization – Memory Speed – Motherboard Memory Capacity – Extended Memory – BIOS - Keyboard – Keyboard Switch – Keyboard Organization – Keyboard Type – Mouse – Mouse Type – #Connecting Mouse# – Mouse Resolution – Add on cards and its types.

UNIT III

Backup Troubleshooting - BIOS Upgrade Troubleshooting - Troubleshooting CD Drives - CMOS Maintenance and Troubleshooting - Troubleshooting CPU Problems -Troubleshooting a Drive Adapter - Troubleshooting DVD Drives - Troubleshooting Cooling Problems - Floppy Drive and HDD Troubleshooting.

UNIT IV

Keyboard Maintenance and Troubleshooting - Memory Troubleshooting - Troubleshooting Pointing Devices - Motherboard Troubleshooting - #Parallel Port Troubleshooting# - Plug-and-Play Configuration and Troubleshooting.

UNIT V

Troubleshooting Power Protection Devices - Troubleshooting Power Supplies and Power Management - #Troubleshooting the SCSI System# - Troubleshooting Sound Boards and Video Adapters. Installing Speakers/Headphones - Installing the Operating System -Removal and Replacement Procedures - #Upgrading PC Components# - Installing PC Peripherals - Installing Network/Modem Connections.

Text Books

1. Manohar Lotia, Pradeep Nair, Payal Lotia, Modern Computer Hardware Course, BPB Publications, Second Revised Edition, 2006.

UNIT I : Chapter I, II, III

UNIT II: Chapter IV

2. Stephen J. Bigelow, PC Troubleshooting & Repair - The Ultimate Reference, Dreamtech, Second Edition, Reprint, 2004.

UNIT III: Chapter 4, Chapter 6, Chapter 8, Chapter 10, Chapter 12, Chapter 14,
Chapter 15 , Chapter 18 , Chapter 19, Chapter 20

UNIT IV : Chapter 22 , Chapter 23, Chapter 24, Chapter 26, Chapter 27, Chapter 28

UNIT V : Chapter 29 , Chapter 30, Chapter 32, Chapter 34, Chapter 35). Chapter 14, Chapter 8 (A+ Complete Reference)

Books for Reference

1. David Groth-Sybex, A+ Complete Study Guide, Third Edition, 1999.

COMPUTER HARDWARE & PERIPHERALS

Course Objectives

Identify the names and distinguishing features of different kinds of input and output devices. Describe how the CPU processes data and instructions and controls the operation of all other devices. Identify the names, distinguishing features, and units for measuring different kinds of memory and storage devices.

Course Outcomes

After studying this course, you should be able to:

- CO1:** Identify the principal components of a given computer system
- CO2:** Understand the role of each of these components
- CO3:** Understand the difference between an operating system and an application program, and what each is used for in a computer
- CO4:** Describe some examples of computers and state the effect that the use of computer technology has had on some common products

UNIT-I: Microprocessor System: Introduction of System overview, Introduction to Processors, Memory Interfacing, Interfacing I/O Devices, Interfacing Data Converters, Display Interface, Serial I/O and Data Communication, Higher level Processors

UNIT-II: Introduction to PC Architecture: Study of PC-AT/ATX System, Pentium, Core, Core 2 Core, Core 2 Duo, I3, I5, I7 Processor, Basics of Processor and CPU Block Diagram of Computer and Computer Generation, Motherboards, Chipset and Controllers, BIOS and the Boot Process, Computer Memory.

UNIT-III: Internal Components: IDE and SATA Devices: Hard Disk Drive and CD/DVDs Drives, SCSI Devices, Floppy Disk, Zip Drive, Backup Drive, Expansion Cards- LAN Card, IDE Card, VGA and SVGA Cards, Sound Card, Interface Cards, I/O cards, Video Cards, USB Card, Fire-Wire Cards, Internal Ports, Cables and Connector Types.

UNIT-IV: External Components: Monitors:- CRT, LCD and LED Displays, Printers:- Dot-Matrix Printer, Inkjet Printer, Laser Printer, Scanner:- Photo Scanner, Documents Scanner, Bar Code Scanner, Keyboards, Mouse, External Modem, Ports and Connectors, Batteries, Power supply, Pen Drives, SCSI interface, devices, Laptop Computers, Digital Advance storage technology.

UNIT-V: Network Components: Introduction of Network Cable like UTP, STP, Fiber Optics, Hub, Unmanageable Switch, Manageable Switch, Router, Modem, Wi-Fi, Access Point, PCI Wireless Card, USB Wireless Device, Print Server, USB Network Sharer, Backup Device, Server Hardware etc.

REFERENCE BOOKS

1. Microprocessor Architecture Programming and Application with the 8085 Ramesh Gaonkar Penram International Publication
2. Electronics and Radio Engineering M.L. Gupta Dhanpat rai & Sons, New Delhi
3. PC AND CLONES Hardware, Troubleshooting and Maintenance B. Govinda rajalu, Tata Mc-graw-Hill Publication
4. PC Troubleshooting and Repair Stephen J. Bigelow Dream tech Press, New Delhi Computer Hardware & Peripherals

Course Objectives

Identify the names and distinguishing features of different kinds of network and benefits of network, network devices and TCP/IP & subnetting and protocols.

Course Outcomes

- CO1:** Identify the different kinds of networks.
- CO2:** Knowledge of network devices.
- CO3:** Idea of Transmission Media and Topologies
- CO4:** Different kinds of protocol and networking services.
- CO5:** To gain knowledge about TCP/IP and subnetting.

UNIT - I:

Introduction to networks and networking, LAN, VLAN, CAN, MAN, WAN, Internet and Intranet etc. Uses and benefits of Network, Server-client based network, peer to peer networks.

UNIT – II:

Concept of Server, client, node, segment, backbone, host etc. Analog and Digital transmission, Network Interface Card, Crimping tools and Color standards for Straight crimping and Cross crimping Functions of NIC, Repeaters, Hub, Switches, Routers, Bridges.

UNIT – III:

Media types: STP cable, UTP cable, Coaxial cable, Fiber cable, Base band and Broadband transmission, Cables and Connectors, Physical and logical topologies, Bus, Star, Ring and Mesh topologies

UNIT – IV:

HTTP, FTP and other Different types of protocols, OSI Model, Media Access Method, DNS services, DHCP services, WINS services and RAS services, Web services, Proxy Services etc.

UNIT – V:

Introduction about TCP/IP and Sub-nettings, configuring IP address and subnettings with different Routers and Network, TCP/IP Errors and Solutions.

REFERENCE BOOK

- (1) Networking Complete BPB Publication
- (2) Computer Networking Andrew S. Tanenbawan By PHI

COMPUTER GRAPHICS

Course Objective

The course aims to provide the basic knowledge of Computer Graphics and its application, it also impart knowledge on two dimensional transformation and various clipping concepts.

Course Outcomes

On successful completion of the course, the students will be able to

CO1: Describe the basics of Computer Graphics, input and hard copy device and graphics software

CO2: Explain about RasterScan and Random Scan system

CO3: Explain and illustrate the various algorithms like line drawing, DDA, Bresenham's etc

CO4: discuss about various attributes of output primitives like line attribute, AreaFill, Character fill CO5: Illustrate 2D Geometric Transformations and Explain Matrix representation

CO6: Describe and illustrate Clipping Operations like Line clipping, polygon clipping.

CO7: Discuss about window to viewport coordinate and 2D viewing functions.

UNIT I:

A survey of computer graphics: Computer aided design – Presentation graphics computer art – Entertainment – Education and training – Visualization – ImageProcessing – Graphical user interfaces. Overview of graphics systems: Video display devices – Raster- scan systems – Random scansystems – Graphics monitors and workstation – Input devices – Hard-copy devices –Graphics software.

UNIT II:

Output primitives: Points and lines – Line-drawing algorithms – DDA algorithm – Bresenham's line algorithm – Circle-generating algorithms – Filled-area primitives –Boundary-fill algorithm.

UNIT III:

Attributes of output primitives: Line attributes – Area-fill attributes – Character attributes-Bundled attributes – Inquiry functions – Antialiasing

UNIT IV:

Two-dimensional Geometric transformations: Basic transformations – Matrix representations – Composite transformations – Other transformations.

UNIT V:

Window-to-viewport coordinate – Two-dimensional viewing functions – Clipping operations – Point clipping – Line clipping – Polygon clipping.

Text book:

Donald Hearn and M.Pauline Baker "Computer Graphics" C Version 2 nd Edition, -Pearson Education, 2006.

Unit 1: chapter 1(sec 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8)

chapter 2(sec 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7)

Unit 2: chapter 3(sec 3.1, 3.2, 3.5, 3.11)

Unit 3: chapter 4(sec 4.1, 4.4, 4.5, 4.6, 4.7, 4.8)

Unit 4: chapter 5(sec 5.1, 5.2, 5.3, 5.4)

Unit 5: chapter 6(sec 6.4, 6.5, 6.6, 6.7, 6.8)

Reference Book:

1. Jeffrey J. McConnell," Computer Graphics: Theory Into Practice",Jones and barlett publishers,2006.

2. Peter Shirley, Michael Ashikhmin, Steve Marschner "Fundamentals of Computer Graphics",CRC Press,2009.

PRINCIPLES OF ANIMATION

Course Objective

This course is designed to provide an overview of History of animation. It also enables the student to get a detailed knowledge on fundamentals of animation from traditional animation to CGI animation.

Course Outcomes

On the successful completion of the course, students will be able to

CO1: Explain the basic of animation and its history

CO2: Explain the Basic rules and principles of animation

CO3: Describe about various timing for animation and also the use of camera angles

CO4 Describe about Animation production process in detail

CO5: Understand and apply basic traditional animation

CO6: Implementation of sample animations like Bouncing ball etc.,

Unit-1:

Introduction to Animation & History of Animation: What is Animation, History of Animation – Starting from Early approaches to motion in art, Animation before film, Traditional Animation – The silent era, Walt Disney & Warner Bros., Snow White & the seven dwarfs, The Television era, Stop-motion, CGI Animation - till date. Different Types of Animation: 1. Traditional Animation - Cel Animation or hand drawn Animation 2. Stop Motion Animation – Puppet Animation, Clay Animation, Cut-out Animation, Silhouette Animation, Model Animation, Object Animation etc. 3. Computer Animation – 2D Animation, 3D Animation

Unit-2:

The 12 basic Principles of Animation: The basic rules of animation including Squash and stretch, Anticipation, Staging, Straight Ahead Action and Pose to Pose, Follow Through and Overlapping Action, Slow In and Slow Out, Arc, Secondary Action, Timing, Exaggeration, Solid drawing, Appeal

Unit-3:

Timing for Animation: Ease in & Ease out, X-Sheet handling, Field Chart usage, Camera Panning, Zoom-in & Zoom-out, Cut-shot, Dissolve transform, trick shot, hook-up shot etc. How to create hook-up poses for animation. How to use camera angles to emphasize performance

Unit-4:

Animation Production Process: Understand Animation Requirements, Basic steps in Pre-Production, Production and Post-Production.

Unit-5:

Basic Traditional Animation Samples: To apply the principles of animation, Posing and Character emotion. How to observe and study human behavior and expressions to help visualize concepts. How to enact and emote. Sample animations - Bouncing Ball Animation, Walk Cycle, Run Cycle, 4 Leg Walk cycle, Fly Cycle

Reference Books Online References:

1. The Illusion of Life: Disney Animation - Frank Thomas and Ollie Johnston
2. Cartoon Animation - Preston Blair
3. The Animators Survival Kit - Richard Williams
4. History of Animation - https://en.wikipedia.org/wiki/History_of_animation
5. Principles of Animation - https://en.wikipedia.org/wiki/12_basic_principles_of_animation
6. YouTube Video –

<https://www.youtube.com/watch?v=haa7n3UGyDc&feature=youtu>

VISUAL EFFECTS

Course Objective

This course is designed to provide an overview of Visual effects. It also enables the student to get a detailed knowledge on various visual effects tools and gives a clear knowledge on 2d and 3d effects.

Course Outcomes

On the successful completion of the course, students will be able to

- CO1:** Explain the overview of visual effects, 3D modeling
- CO2:** Describe various tracking and cloning effects
- CO3:** Understand and implement the various effects
- CO4:** Describe about 3D stereo effects in detail
- CO5:** Differentiate anaglyph and polarised
- CO6:** Implementation of image conversion from 2D to 3D
- CO7:** Differentiate 2D and 3D

Unit – I

Visual effect overview, image animation, 3d tools converting, Controlling timeline panels, Visual effect making, 3d model compositing, Designing Glow Effects

Unit – II

Tracking, one point track, two point track, Four point track, Double tracking, Paint Clone effect, Wire remove effect, Sky replace effect, background changing effect, Masking, Rotoscoping , 3D character masking.

Unit - III

Bug effect, Healer effect, Time warp effect, Time Stretching effect, Image to video effect, Day to night effect, Demon face warp, 3D depth effect

Unit - IV

3D stereo effect, 3d stereo convert effect, 3D glass making, Different between anaglyph; polarised, Change 3d stereo in premier software

Unit – V

Visual Effects Tool and advanced functions– Converting images from 2D to 3D Pictures. Creating 3D Effects- Differentiation 2D effects and 3D effects.

Reference Books:

- 1) Match moving: The Invisible Art of Camera Tracking by Tim Dobbert. Tim Dobbert
- 2) The After Effects Illusionist: All the Effects in One Complete Guide by Chad Perkins .Chad Perkins
- 3) The Visual Effects Arsenal: VFX Solutions for the Independent Filmmaker by Bill Byrne . Bill Byrne
- 4) After Effects Expressions by Marcus Geduld Marcus. Geduld (Author)
- 5) Filming the Fantastic: A Guide to Visual Effects Cinematography by Mark Sawicki . Mark Sawicki

COMPUTER NETWORKS

Course Objective

The course aims to provide an understanding of computer networks concepts like Wired and Wireless Network, it also imparts knowledge about routing algorithm, DNS, WWW and E-mail technologies.

Course Outcomes

On successful completion of the course, the students will be able to

- CO1:** Describe the uses of Computer Networks, and hardware and software needed for implementing Network
- CO2:** Explain and illustrate the layers in OSI reference model
- CO3:** Discuss the difference between guided transmission media and wireless transmission.
- CO4:** Use Error detection and correction and explain sliding window protocol
- CO5:** Use suitable routing algorithm and congestion control algorithm
- CO6:** Discuss about transport layer and elements of transport protocols.
- CO7:** Explain about DNS , E-mail and WWW

UNIT I

Introduction: uses of computer networks - network hardware - network software -reference models - example networks - network standardization

UNIT II

The physical layer: guided transmission media - wireless transmission – communication satellites - the public switched telephone network

UNIT III

The data link layer: data link layer design issues - error detection and correction -elementary data link protocols - sliding window protocols

UNIT IV

The network layer: network layer design issues - routing algorithms - congestion control algorithms- quality of service – internetworking

UNIT V

The transport layer: the transport service - elements of transport protocols - a simple transport protocol the application layer: dns--domain name system - electronic mail – the world wide web

Text Book:

Andrew S. Tanenbaum “Computer Network”, 4 th Edition,Prentice Hall, 2006.

UNIT 1: CHAPTER 1(Sec 1.1, 1.2, 1.3, 1.4, 1.5, 1.6)

UNIT 2: CHAPTER 2(Sec 2.3, 2.4, 2.5)

UNIT 3: CHAPTER 3(Sec 3.1, 3.2, 3.3, 3.4)

UNIT 4: CHAPTER 5(Sec 5.1, 5.2,5.3,5.4,5.5)

UNIT 5: CHAPTER 6(Sec 6.1,6.2,6.3,7.1,7.2,7.3)

Reference Book:

1.Forouzan “Computer Networks”,Tata McGraw-Hill Education, 2012.

2. William Stallings, “Data and Computer Communications”, 6 th Edition, Prentice Hall of India, 2002.

INTERNET AND ITS APPLICATIONS

Course Objective

This course presents the student with an introduction to the Internet and its services, applications and tools. World Wide Web and its facilities, applications and tools. Topics include Internet history, a survey of Internet-based facilities and applications (e.g., e-mail, web browsers, file transfer utilities, list servers, etc), and Web-based research and information resources. The World Wide Web service is emphasized and basic Web page creation with HTML is introduced.

Course Outcomes

Upon successful completion of the course, the student should be able to

- CO1:** Defines terms related to the Internet and how computers are connected to the Internet.
- CO2:** Explains the web browsers and internet addressing.
- CO3:** Demonstrate an understanding of and the ability to use electronic mail.
- CO4:** Describes File Transfer Protocol and Hyper Text Transfer Protocol.
- CO5:** Explains Search Engines for the Internet.
- CO6:** Describes the Security and Privacy policies used in Search Engines.

UNIT – I

Internet – Introduction– Getting Connected: Dial–up connection – DSL – Cellular Broadband – Wireless Broadband – WWW –Web Technologies: HTML

UNIT – II

Web Browsers and Web browsing: Web Browsers – Types of Browsers – Web Browsing – Internet Addressing: IP address – Domain Name – Uniform Resource Locator (URL)

UNIT – III

E–mail: Names and Addresses – Mailing Basics – Spamming – E–mail Safety Tips – Instant Messaging: Instant Messaging from the Web – Internet Telephony – Videoconferencing

UNIT – IV

Internet Protocol: TCP/IP – File Transfer Protocol – Hyper Text Transfer Protocol –Telnet – Gopher – WAIS.

UNIT – V

Searching the Web: Web Index – Web Directory – Search Engine – Meta–search Engines – Anonymity, Safety and Privacy: Privacy – Cookies – Understanding Security and privacy

Text Book:

Alexis Leon and Mathews Leon, “Internet for Everyone”, Leon Press, 15th Anniversary Edition, 2012.

UNIT I : Chapter 1 Sections 1.1, 1.3, 1.6, Chapter 3 Sections 3.2, 3.5, 3.8,3.9, Chapter 4 Section 4.1, 4.2, 4.4, Chapter 12 Sections 12.1, 12.2

UNIT II: Chapter 5 Sections 5.1 – 5.3, Chapter 8 Chapter 8.2, 8.3, 8.5

UNIT III: Chapter 10 Sections 10.4, 10.5, 10.8, 10.11, Chapter 17 Sections 17.2 – 17.4

UNIT IV: Chapter 9 Sections 9.2– 9.7

UNIT V: Chapter 6 Sections 6.4 Chapter 7 Sections 7.2, 7.4

Reference Books:

1. Deitel and Deitel, “Internet and World Wide Web – How to Program”, PHI, 4th Edition, 2008.
2. Christian Cramlish, ” The Internet”, BPB, 2nd Edition, 2004.

OPERATING SYSTEM

Course Objective

To learn the fundamentals of Operating Systems - To gain knowledge on Distributed operating system concepts that includes architecture, Mutual exclusion algorithms, Deadlock detection algorithms and agreement protocols - To gain insight on to the distributed resource management components

Course Outcomes

- CO1 Master functions, structures and history of operating systems
- CO2 Master understanding of design issues associated with operating systems
- CO3 Master various process management concepts including scheduling, synchronization,
- CO4 deadlocks
- CO5 Be familiar with multithreading
- CO6 Master concepts of memory management including virtual memory
- CO7 Master system resources sharing among the users
- CO8 Master issues related to file system interface and implementation, disk management
- CO9 Be familiar with protection and security mechanisms
- CO10 Be familiar with various types of operating systems including Unix

UNIT – I

Evolution of operating systems– Functions – Different views of OS – Batch processing, Multiprocessing, Time sharing OS – I/ O programming concepts – Interrupt Structure & processing

UNIT – II

Memory Management – Single Contiguous Allocation – Partitioned Allocation –Relocatable Partitions allocations – Paged and Demand paged Memory Management –Segmented Memory Management – Segmented and Demand paged Memory Management – overlay Techniques – Swapping

UNIT – III

Processor Management – Job Scheduling – Process Scheduling – Functions and Policies – Evolution of Round Robin Multiprogramming Performance – Process Synchronisation– Wait and Signal mechanisms – Semaphores P & V Operations – Deadlock – Banker’sAlgorithm.

UNIT – IV

I/O Traffic Controller, I/O Scheduler, I/O Device Handlers – Spooling.

UNIT – V

File Management : Simple File System, General Model of a File System, Physical and Logical File System.

Text Book:

- 1.E. Madnick& John J.Donavan,“Operating Systems” Tata McGraw Hill Publishing Co.,Limited.
 - 2.PradeepK.Sinha ,”Distributed Operating Systems”, Prentice – Hall of India Private Limited
- UNIT I : Chapter 1, 2 UNIT II : Chapter 3 UNIT III : Chapter 4
UNIT IV : Chapter 5 UNIT V : Chapter 6

Reference Books:

D.M. Dhamdhare,“System Programming and Operating Systems”Tata McGraw HillPublishing Co., Limited.

SOFTWARE ENGINEERING

Course Objective

This course aims at introducing to the students about the product that is to be engineered and the process that provides a framework for the engineering technology. The course facilitates the students to analyze risk in software design and quality and to plan, design, develop and validate the software project.

Course Outcomes

On the successful completion of the course, students will be able to

CO1: Explain a process model for a software project development

CO2: Prepare the SRS, Design document, Project plan of a given software system

CO3: Apply Project Management and Requirement analysis, Principles to S/W project development.

CO4: Analyze the cost estimate and problem complexity using various estimation techniques

CO5: Generate test cases using the techniques involved in selecting:
(a) White Box testing (b) Block Box testing

CO6: Explain the advantages of configuration management and risk management activities.

UNIT I: Introduction to Software Engineering: Definitions - Size factors – Quality and Productivity Factors – Managerial Issues. The Product: The evolving role of software – Software – characteristics - applications. The process: Software engineering: A Layered Technology – The software process –Evolutionary software process models: Spiral model.

UNIT II: Planning a Software Project: Defining the problem – Developing a solution Strategy –Planning the development Process – Planning an organizational structure – Other Planning Activities.

UNIT III: Software Cost Estimation: Software Cost Factors – Software Cost Estimation Techniques – Staffing Level Estimation. Software Requirements Definition: The Software Requirements Specification – Formal Specification Techniques.

UNIT IV: Software Design: Fundamental Design Concepts – Modules and Modularization Criteria – Design Notation – Design techniques – Design Guidelines. Implementation Issues: Structured coding techniques – coding style – Documentation guidelines.

UNIT V: Verification and Validation Techniques: Quality Assurance – Walkthroughs and inspections – Static analysis –Unit testing and debugging – System testing – Formal verification.

Text Books:

1. Richard E. Fairly – “Software Engineering Concepts”, Tata McGraw Hill Publication, 1997 edition.

Unit 1: chapter 1(sec 1.1-1.4) Unit 2: chapter 2(sec 2.1-2.5)

Unit 3: chapter 3(sec 3.1-3.4) chapter 4(sec 4.1-4.2)

Unit 4: chapter 5(sec 5.1-5.2, 5.9) chapter 6(sec 6.1, 6.2, 6.4)

Unit 5: chapter 8(sec 8.1-8.3, 8.5-8.7)

2. Roger S. Pressman – “Software Engineering A Practitioner’s Approach”, 5th edition, McGraw Hill, 2001.

UNIT 1: CHAPTER 1(Sec 1.1, 1.2)

Reference book:

1. Watts S. Humphrey – “A Discipline for Software Engineering”, Addison Wesley Company, 1995.

PYTHON PROGRAMMING

Course Objective

The course is designed to provide Basic knowledge of Python. Python programming is intended for software engineers, system analysts, program managers and user support personnel who wish to learn the Python programming language.

Course Outcomes

- CO1 Be fluent in the use of procedural statements — assignments, conditional statements, loops, function calls — and sequences.
- CO2 Be able to design, code, and test small Python programs that meet requirements expressed in English.
- CO3 Basic understanding of top-down design.
- CO4 Have knowledge of Regular Expressions and Network Programming.
- CO5 Understand the GUI Programming with TKinter

UNIT I

Welcome to Python - What is Python – History of Python – Features of Python – Installing Python – Running Python - Comments - Operators - Variables and Assignment - Python Objects – Standard Types - Other Built-in Types - Internal Types - Standard Type Operators - Standard Type Built-in Functions - Categorizing the Standard Types - Unsupported Types

UNIT II

Introduction to Numbers – Integers - Floating Point Real Numbers - Complex Numbers – Operators -Built-in Functions -Sequences – Strings - Strings and Operators - String-only Operators - Built-in Functions - String Built-in Methods - Special Features of Strings

UNIT III

Lists – Operators - Built-in Functions - List Type Built-in Methods - Special Features of Lists - Tuples - Tuple Operators and Built-in Functions - Special Features of Tuples - Conditionals and Loops – if statement - else statement - else if statement - while statement - for statement - break statement - continue statement - pass statement - else statement

UNIT IV

Regular Expressions – Introduction – Special symbols and characters for Regular Expressions – Regular Expressions and Python – Network Programming – Introduction – Network programming in Python – Sockets : Communication end points

UNIT V

GUI Programming with TKinter – Introduction TKinter and Python Programming – Tkinter examples – Related modules and other GUIs – Web programming – Web surfing with Python – Advanced web clients.

Text Books

1. Chun, J Wesley, CORE Python Programming, 2 nd Edition, Pearson, 2007 Reprint 2010.
UNIT I : Chapter 1, 2, 4 UNIT II : Chapter 5, 6
UNIT III : Chapter 6, 8 UNIT IV : Chapter 15, 16
UNIT V : Chapter 18, 19

Reference Book

- 1.Jeffrey Elkner, Chris Meyers Allen Downey, Learning with Python, Dreamtech Press, 2015

PYTHON PROGRAMMING LAB

Course Objective

The course is designed to provide basic knowledge of Python programming. It is intended to learn the Python programming language.

Course Outcomes

Problem solving and programming capability

- CO1. Describe the Numbers, Math functions, Strings, List, Tuples and Dictionaries in Python
- CO2. Express different Decision Making statements and Functions
- CO3. Understand and summarize different File handling operations
- CO4 Design and develop Client Server network applications using Python
- CO5 Understand the GUI Programming with TKinter

Problem solving and programming capability

1. Write a python program to perform operation on :
 - a) List
 - b) Tuple
 - c) Dictionary
2. Write a python program using
 - a) Decision making statement
 - b) Looping statements
3. Write a Python program to implement using the concept of Regular Expression.
4. Write a Python program using 'calendar'.
5. Write a Python program to create applications using controls in 'Tkinter'

E-COMMERCE AND ITS APPLICATIONS

Course objective

This course is aimed at providing the student with an in-depth understanding of the still emerging field of E-Commerce. By the end of the course, the student will be able to understand the various elements that are fundamental for a successful E-Commerce enterprise and develop a business plan for developing one such E-Commerce site.

Course Outcomes

Upon completing the course, the participants will be able to:

- CO1** Gain a comprehensive understanding of the E-Commerce landscape.
- CO2** Business models, and the technology and infrastructure underpinnings of the business.
- CO3** Leverage the E-Commerce platforms to enhance current business or incubate new businesses.
- CO4** Gain an understanding on how innovative use of the E-Commerce can help developing competitive advantage.
- CO5** Develop an understanding on how internet can help business grow
- CO6** Gain an understanding on the importance of security, privacy, and ethical issues as they relate to E-Commerce.

UNIT – I

E-Commerce–Electronic Commerce – E-Commerce types – E-Commerce and world at the large – E Commerce Case studies: Intel, Amazon

UNIT – II

Electronic Mail – The X, 400 Messages handling system – Internet addresses – Multipurpose Internet mail Extension – X.500 Directory Services – E-Mail User agent.

UNIT – III

EDI– Costs and benefits – Components of EDI Systems – EDI implementation issues – EDIFACT – EDIFACT Message Structure.

UNIT – IV

Cyber Security – Cyber Attacks – Hacking – SSL – Authentication and assurance of DATA integrity – Cryptographic based solution – Digital Signatures – VPN.

UNIT – V

Electronic Payment Systems – Payment gateway – internet banking – the SET protocol – E-Cash – E-Cheque – Elements of electronics payments

Textbook:

1. Kamallesh.Kbalaji, Debjani Nag “E-Commerce – The Cutting Edge of Business”, 2nd Edition, Tata McGraw Hill.

Reference Books:

1. Ravi Kalakota and Andrew B.Whinston“ Frontiers of E-Commerce “ – Pearson Edu.
2. S.Jaiswal“E-Commerce : Doing Business through internet “ , Galgotia Publication, 2001

DATA MINING

Course Objective

To understand the concepts of Data Mining. To learn about Classification, prediction and cluster analysis techniques. To learn about applications of Data and knowledge mining.

Course Outcomes

On the successful completion of the course, students will be able to

- CO1: Describe the importance of Data Mining.
- CO2: Explain the Various types of Data Mining techniques
- CO3: Understand the various Phases of Data Mining
- CO4: Differentiate the various types of Data Clustering
- CO5: Implement the different Types of Data classification in his project work
- CO6: Measure the Test data in various Data Mining Techniques

Unit -I

Introduction : Data Mining – Motivation, Importance of DM Functionalities, Basic Data Mining Tasks, DM Applications, and Social Implications

Unit –II

Data Preprocessing, Data Mining Primitives, Languages : Data Cleaning, Data Integration and Transformation, Data Reduction, Discretization and concept of Hierarchy Generation, Task relevant Data, Background Knowledge, Presentation and Visualization of Discovered Patterns.

Unit –III

Clustering: Cluster Analysis – Partitioning Methods – Hierarchical Methods – Density Based Methods – Grid Based Methods

Unit -IV

Data Mining Algorithms : Association Rule Mining, Classification and Prediction – Decision Tree, Bayesian Classification Back Propagation, Cluster Analysis, Outlier Analysis.

Unit-V

Web, Temporal and Spatial Data Mining : Web Content Mining, Web Structure Mining, Web Usages Mining, Spatial Mining, Generalization and specialization, Spatial Rules, Spatial Classification and Clustering Algorithms, Temporal Mining, Modeling Temporal Events, Times Series, Pattern Detection, Sequences.

Reference Books :

1. Jiawei I-lan & Micheline Kamblar, “Data Mining: Concepts and Techniques”, Harcourt India Pvt. Ltd., First Indian Reprint, 2001
2. Margaret H. Dunham, “Data Mining : Introduction and Advance Topics”, Pearson Education, First Indian Reprint, 2003
3. Arun K. Pujari, “Data Mining Techniques”, University Press (India) Limited, First edition, 2001
4. Efreem O, Mallach, “Decision Support and Data Warehousing Systems”, Mcgraw-Hill International Edition, 2000

LINUX

Course Objective

The purpose of this course is to teach experienced Linux users the techniques, methods, and policies used in Linux system administration.

Course Outcomes

- CO1** Manage system and services startup and shutdown
- CO2** Select and use system administration tools when appropriate
- CO3** Configure and manage printers
- CO4** Use packaging tools to create, install, and de-install packages
- CO5** Manage logging
- CO6** Perform memory management

UNIT - I :

Logging In and Logging Out, Anatomy of Linux OS, Directory Structure, /usr Directory, File Types: User datafiles, System data files, Executable files. Naming files and directories, Spawning Processes. Shell: Creating User Account, Shell Program, bash shell, Changing shell prompt. Commands: Basic Syntax for a command, Exploring the Home Directory, ls, mkdir, rmdir, stat, cat, rm, mv, cp.

UNIT - II :

Editor: Vi editor. Hooking up Hardware Devices: Formatting a Floppy Disk, Gathering important system information. Backing Up and restoring the File System: Simple Backup, gzip, gunzip, tar. Printing files: Print Spool directory, Sending files to Printer.

UNIT - III :

Sharing Files with other Users: Maintaining User Accounts, Changing Password, Creating Group Accounts, Granting Access to files, Changing File Ownership, Protecting Files, Making a File Read-Only. Working with Processes: Types of processes, ps Command, Creating process, killing process, free command and top utility.

UNIT - IV :

Managing Disk Space: df, du commands, Creating Additional Free Disk Space, Locating Unused Files, Setting System Clock.

UNIT - V :

Communication Utilities: who, who am i, finger, mesg, write, wall, talk, Creating a message of the day. X Window System, Graphical User Interfaces: KDE and GNOME Desktop Environment.

Text Books:

1. SAMS Teach Yourself Linux by Craig and Coletta Witherspoon [Techmedia]

Reference Books:

1. LINUX complete reference by Richard Peterson



BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI- 620 024

ENVIRONMENTAL STUDIES – U19ES

(Applicable to the candidates admitted from the Academic year 2019-20 onwards)

Unit: 1 The Multidisciplinary nature of environmental studies
Definition, scope and importance. (2 lectures)
Need for public awareness

Unit: 2 Natural Resources:
Renewable and non-renewable resources:
Natural resources and associated problems.

- a) Forest resources: use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
- b) Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams benefits and problems.
- c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
- d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
- e) Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies.
- f) Land resources: Land as a resources, land degradation, man induced Landslides, soil erosion and desertification.

- Role of an individual in conservation of natural resources.
- Equitable use of resources for sustainable lifestyles.

(8 lectures)

Unit: 3 **Ecosystems**

- Concept of an ecosystem.
- Structure and function of an ecosystem.
- Producers, consumers and decomposers
- Energy flow in the ecosystem
- Ecological succession.
- Food chains, food webs and ecological pyramids
- Introduction, types, characteristic features, structure and function of the following ecosystem:-

- a. Forest ecosystem
- b. Grassland ecosystem
- c. Desert ecosystem
- d. Aquatic ecosystems, (ponds, streams, lakes, rivers, oceans, estuaries)

(6 lectures)

Unit: 4 Biodiversity and its conservation

- Introduction – Definition : Genetic, species and ecosystem diversity
- Biogeographical classification of India
- Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values
- Biodiversity at global, National and local levels
- India as a mega-diversity nation
- Hot-spots of biodiversity
- Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts.
- Endangered and endemic species of India
- Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.
- Biological Diversity Act 2002/ BD Rules, 2004

(8 lectures)

Unit: 5 Environmental Pollution

Definition

Causes, effects and control measures of :

- a. Air Pollution
 - b. Water Pollution
 - c. Soil Pollution
 - d. Marine Pollution
 - e. Noise pollution
 - f. Thermal Pollution
 - g. Nuclear hazards
- Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
 - Role of an individual in prevention of pollution
 - Pollution case studies
 - Disaster management: floods, earthquake, cyclone and landslides.
 - III-Effects of Fireworks: Firework and Celebrations, Health Hazards, Types of Fire, Firework and Safety

(8 lectures)

Unit: 6 Social Issues and the Environment

- From Unsustainable to Sustainable development.
- Urban problems related to energy.
- Water conservation, rain water harvesting, watershed management.
- Resettlement and rehabilitation of people; its problems and concerns.

Case studies

- Environmental ethics: Issues and possible solutions.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
- Wasteland reclamation.
- Consumerism and waste products.
- Environment Protection Act.
- Air (Prevention and Control of Pollution) Act.
- Water (Prevention and Control of Pollution) Act.
- Wildlife Protection Act.
- Forest Conservation Act.
- Issues involved in enforcement of environmental legislation
- Public awareness.

(7 lectures)

Unit: 7 Human Population and the Environment

- Population growth, variation among nations.
- Population explosion – Family Welfare Programmes
- Environment and human health
- Human Rights - Value Education
- HIV/ AIDS - Women and Child Welfare
- Role of Information Technology in Environment and human health
- Case studies.

Unit: 8 Field Work

- Visit to a local area to document environmental assets-river / forest/ grassland/ hill / mountain

References:

1. Agarwal, K.C. 2001 Environmental Biology, Nidi Public Ltd Bikaner.
2. Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt ltd, Ahamedabad – 380013, India, E-mail: mapin@icenet.net(R)
3. Brunner R.C. 1989, Hazardous Waste Incineration, McGraw Hill Inc 480 p
4. Clark R.S. Marine Pollution, Clanderson Press Oxford (TB)
5. Cunningham, W.P.Cooper, T.H.Gorhani E & Hepworth, M.T. 2001.
6. De A.K. Environmental Chemistry, Wiley Eastern Ltd
7. Down to Earth, Centre for Science and Environment (R)
8. Gleick, H.P. 1993. Water in crisis, Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute Oxford University, Press 473p.
9. Hawkins, R.E. Encyclopedia of India Natural History, Bombay Natural History Society, Bombay (R)
10. Heywood, V.H & Watson, R.T. 1995. Global Biodiversity Assessment. Cambridge University Press 1140 p.
11. Jadhav, H & Bhosale, V.M. 1995. Environmental Protection and Laws Himalaya Pub. House, Delhi 284 p.
12. Mckinney, M.L. & Schoch R.M. 1996. Environmental Science systems & Solutions, Web enhanced edition 639 p.
13. Mhaskar A.K. Matter Hazardous, Techno-Science Publications (TB)
14. Miller T.G. Jr. Environmental Science, Wadsworth Publishing Co. (TB)
15. Odum, E.P. 1971 Fundamentals of Ecology. W.B. Saunders Co. USA. 574 p
16. Rao MN & Datta, A.K. 1987 Waste Water treatment, Oxford & IBH Publication Co. Pvt Ltd 345 p.
17. Sharma B.K. 2001 Environmental chemistry Goel Publ House, Meerut.
18. Survey of the Environment, The Hindu (M).
19. Townsend C. Harper, J and Michael Begon, Essentials of Ecology, Blackwell science (TB)
20. Trivedi R.K. Handbook of Environmental Laws, Rules, Guidelines, Compliances and Standards, Vol. I and II, Enviro Media (R).
21. Trivedi R.K. and P.K. Goel, Introduction to air pollution, Techno-Science Publications (TB).
22. Wagner K.D. 1998 Environmental Management. W.B. Saunders Co. Philadelphia USA 499 p
(M) Magazine (R) Reference (TB) Textbook
23. <http://nbaindia.org/uploaded/Biodiversityindia/Legal/33%20Biological%20Diversity%20Rules,%202004.pdf>.

SEMESTER – II

COURSE CODE: U19SBE1

HOURS: 2

CREDITS: 2

OFFICE AUTOMATION

UNIT I:

MS- Word- Introduction to Computers - Hardware - Software, Operating System: Windows XP -MS-Paint, Notepad, WordPad, Introduction to MS-Word, Creating, Editing and Formatting Document - Working with Drawing objects - Text Manipulation

UNIT II:

Working with Tables – Columns – Labels - Plotting, editing and Filling drawing objects - Bookmark – Header & Footer - Checking and Correcting a document - Creating Labels – Envelops – Mail Merge – Formatted output and Report generation Printing Documents, Working with Internet.

UNIT III:

Ms – Excel - Ms – Excel: Introduction – Data Entry – Cell Formatting - Plotting Graphs – Workbook Features – Library Functions

UNIT IV:

Conditional Functions and Data Sorting – Limit the data on a worksheet - Data Validation –Data consolidation - Chart creation - Checking and Correcting Data - Tracking and Managing Changes- Advanced Features

UNIT V:

MS – PowerPoint- Introduction - Creating, Editing and Formatting Presentation – Applying Transition and Animation Effects - Applying Design Templates - Viewing and Setting up a Slide Show - Navigating among Different Views - Ms Outlook: Introduction to Folder List – Address Book.

TEXTBOOKS

1. Jill Murphy, Microsoft Office Word- Comprehensive Course, Labyrinth Publications, 2003.
2. McGraw-Hill/Irwin-Deborah Hinkle, Microsoft Office 2003 PowerPoint: A Professional Approach, Comprehensive w/ Student CD, New Delhi, 2003.
3. Nellai Kannan, C., MS-Office, Nels Publications, Tamil Nadu, 2002.

SEMESTER – III

COURSE CODE: U19SBE2

HOURS: 2

CREDITS: 2

DESKTOP PUBLISHING

UNIT I:

Photoshop Tools : Move, Type, Marquee, Lasso, Crop, Shapes, Healing, Brush, Patch, Cloning Stamp, Eraser, Gradient, Blur, Smudge, Dodge, Pen, Eye Dropper, Patch selection and Zoom tool.

Layer: New layer, Layer set, Duplicate layer, Rasterize and Merge down

Layer Styles: Drop shadow, inner shadow, outer glow & inner glow, Bevel and Emboss, Gradient overlay, Stroke. Text formatting

UNIT II:

File: Save, File formats, Page set up.

Edit: Check spelling, Copy merged, Fill, Transform, Define pattern.

Image: Motion blur, Twirl, lens flare, Glowing edges, lighting effects, solarize, water paper, Stained glass, Mosaic Tiles.

Window: Character and Paragraph settings.

COREL DRAW:

UNIT III:

Drawing Tools: Pick, Shape, Knife, eraser, Smudge, Roughen brush, free transform, Zoom ,hand, Free hand, Bezier, Artistic, Pen, Poly line, Point, Interactive connective, Spiral tool.

Colour Tool: Paint Bucket Tool, Eye Dropper, Fill Tools. Fill Options, Stroke Options.

UNIT IV:

Special Effects: 3D effects, Add perspective, Blend, Contour, Artistic media, lens, and Power clip.

Shaping Options: Weld, trim, Intersect.

Text Effects: Format text, bullet, and fit text to path, align and straighten, spell check.

File Menu: Save, Save as, Import, Page set Up.

PAGE MAKER:

UNIT V:

Page Maker Tools: Pointer, Rotate, Line, Rectangle, Ellipse, Polygon, Hand, Text, Crop, Rectangle frame tools. Text layout, Style and Objects: Alignments, Styles, fill, frame options, Stroke, Group, Lock, unlock, mask, polygon settings character and paragraph settings.

Text Editing: Edit story: Undo, Redo, Cut, Copy, Paste, paste Special, Spelling check and Find.

File: Page set up, save, Save as.

TEXTBOOKS

1. CorelDraw IN Simple Steps – Shalini Gupta Corel DRAW Bible - DEBORAH MILLER
2. Teach Yourself Adobe Photoshop – Rose Carla Adobe Photoshop Cs Classroom in a Book by Adobe Press.
3. Using Microsoft Word - Asmita Bhatt Pagemaker In Easy Steps - Scott Basham Ctoa Material By Genesis.

SEMESTER – III

COURSE CODE: U19SBE3P

HOURS: 2

CREDITS: 2

OFFICE AUTOMATION & DESKTOP PUBLISHING LAB

UNIT I:

Office Automation

1. MS – Word: Text Formatting, Mail Merge
2. Ms – Excel: Implement the Statistical & Mathematical Function
(Using Min ,Max, Median, Average, Standard Deviation, Correlation, Logical ‘if’ Condition) for the given data.

Prepare a Chart for a given Data using Pie diagram / Histogram

UNIT II:

Photoshop

3. Design a College Brochure / Birthday Card.
4. Cropping, rotating and Overlapping the image.
5. Create a single image from Multiple image.
6. Creating an image with multilayer’s.

UNIT III:

Corel Draw

7. Design a Visiting Card \ Greeting Card using Draw & Text tools.
8. Create a logo for a Company \ College.

UNIT IV:

Page Maker

9. Type and format a letter using text tool.
10. Prepare a Invitation for College Day /Sports Day.

PART – IV: VALUE EDUCATION - U19VE

HOURS: 2

CREDITS: 2

Learning Objectives

This subject deals with the

- Philosophy of life
- Individual qualities
- social values
- Mind culture
- Personal health.

UNIT I:

PHILOSOPHY OF LIFE Human Life on Earth (Kural 629), Purpose of Life (Kural 46) Meaning and Philosophy of Life(Kural 131, 226) The Law of Nature (Kural 374) Glorifying All form of Life in this Universe (Kural 322, 327) – Protecting Nature /Universe (Kural 16, 20, 1038)

UNIT II:

INDIVIDUAL QUALITIES Basic Culture (Kural 72, 431) Thought Analysis (Kural 282, 467, 666) Regulating desire (Kural 367), Guarding against anger (Kural 158, 305, 306, 314), To get rid of Anxiety (Kural 629), The Rewards of Blessing (Kural 3), Benevolence of Friendship (Kural 786), Love and Charity (Kural 76), Self – tranquility/Peace (Kural 318)

UNIT III:

SOCIAL VALUES (INDIVIDUAL AND SOCIAL WELFARE) Family (Kural 45), Peace in Family (Kural 1025), Society (Kural 446), The Law of Life (Kural 952), Brotherhood (Kural 807) , The Pride of Womanhood (Kural 56) Five responsibilities/duties of Man : a) to himself, b) to his family, c) to his environment, d) to his society, e) to the Universe in his lives (Kural 43, 981) , Thriftness (Thrift)/Economics (Kural 754), Health (Kural 298), Education (Kural 400), Governance (Kural 691), People’s responsibility/ duties of the community (Kural 37), World peace (Kural 572)

UNIT IV:

MIND CULTURE Mind Culture (Kural 457) Life and Mind - Bio - magnetism, Universal Magnetism (God – Realization and Self Realization) - Genetic Centre – Thought Action – Short term Memory – Expansiveness – Thought – Waves, Channelising the Mind, Stages - Meditation (Kural 261, 266, 270), Spiritual Value (Kural 423)

UNIT V:

TENDING PERSONAL HEALTH Structure of the body, the three forces of the body, life body relation, natural causes and unnatural causes for diseases (Kural 941), Methods in Curing diseases (Kural 948, 949) The Five units, simple physical exercises.

LEARNING OUTCOMES:

On successful completion of the course, the students should have acquired knowledge over

- Philosophy of life
- Individual qualities
- social values
- Mind culture
- Personal health

TEXTBOOKS

1. Philosophy of Universal Magnetism (Bio-magnetism, Universal Magnetism) The World
Community Service Centre Vethatri Publications (for Unit IV)
2. Pope, G.U., Dr. Rev., Thirukkural with English Translation, Uma Publication, 156, Serfoji Nagar,
Medical College Road, Thanjavur 613004 (for All Units)
3. Value Education for Health, Happiness and Harmony, The World Community Service Centre
Vethatri Publications (for All Units)

PART – IV: SOFT SKILLS - U19SS

HOURS: 2

CREDITS: 2

Learning Objectives

This subject deals with knowledge of understanding

- Interpersonal skills
- Communicative skills
- Corporate skills
- Resume Writing.

LEARNING OUTCOMES:

On successful completion of the course, the students should have acquired knowledge over

- Interpersonal skills
- Communicative skills
- Corporate skills
- Resume Writing.

UNIT I:

Know Thyself / Understanding Self Introduction to soft skills self discovery – Developing positive attitude – Improving perceptions – Forming values.

UNIT II:

Interpersonal Skills/ Understanding Others Developing interpersonal relationship –Team building – group dynamics –Net working- Improved work relationship

UNIT III:

Communication Skills/ Communication with others Art of Listening –Art of reading –Art of speaking – Art of writing –Art of writing emails-e mail etiquette

UNIT IV:

Corporate Skills/ Working with Others Developing body language –Practising etiquette and mannerism – Time management – Stress management.

UNIT V:

Selling Self/ Job Hunting Writing resume /cv-interview skills – Group discussion –Mock interview Mock GD –Goal setting –Career planning

TEXT BOOKS

1. Meena. K and V.Ayothi (2013) A Book on Development of Soft Skills (Soft Skills: A Road Map to Success) P.R. Publishers & Distributors, No, B-20 &21, V.M.M Complex, Chatiram Bus Stand, Tiruchirapalli -620 002. (Phone No: 0431-2702824: Mobile No: 94433 70597, 98430 7442) Alex K. (2012)
2. Soft Skills – Know Yourself & Know the World, S.Chand & Company LTD, Ram Nagar, New Delhi - 110 055. Mobile No: 94425 14814(Dr.K.Alex)

REFERENCE BOOKS

1. Developing the leader within you John C Maxwell
2. Good to Great by Jim Collins
3. The Seven habits of highly effective people Stephen Covey
4. Emotional Intelligence Daniel Goleman
5. You can Win Shive Khera

Principle centred leadership Stephen Covey

SEMESTER – VI

COURSE CODE: U19GS

PART – V: GENDER STUDIES

HOURS: 1

CREDITS: 1

Learning Objectives

This subject deals with

- Concept of gender,
- Women's Studies vs Gender Studies,
- Areas of Gender Discrimination,
- Women development and Gender Empowerment

LEARNING OUTCOMES:

On successful completion of the course, the students should have acquired knowledge over

- Concept of gender Women's Studies vs Gender Studies Areas of Gender Discrimination
- Women development and Gender Empowerment

UNIT I:

Concepts of Gender: Sex-Gender-Biological Determinism- Patriarchy- Feminism -Gender Discrimination -Gender Division of Labour -Gender Stereotyping-Gender Sensitivity - Gender Equity —Equality-Gender Mainstreaming Empowerment

UNIT II:

Women's Studies Vs Gender Studies: UGC's Guidelines - VII to XI Plans- Gender Studies: Beijing Conference and CEDAW-Exclusiveness and Inclusiveness.

UNIT III:

Areas of Gender Discrimination: Family Sex Ratio-Literacy -Health -Governance Religion Work Vs Employment- Market - Media - Politics Law Domestic Violence — Sexual Harassment — State Policies and Planning

UNIT IV:

Women Development and Gender Empowerment: Initiatives International Women's Dcca4e - International Women's Year - National Policy for Empowerment of Women - Women Empowerment Year 2001- Mainstreaming Global Policies.

UNIT V:

Women's Movements and Safeguarding Mechanism:— In India National / State Commission for Women (NCW) - All Women Police Station Family Court- Domestic Violence Act - Prevention of Sexual Harassment at Work Place Supreme Court Guidelines - Maternity Benefit Act - PNDT Act - Hindu Succession Act 2003 Eve Teasing Prevention Act - Self Help Groups 73 and 74 Amendment for PRIS.

TEXTBOOKS

1. Bhasin Kamala, Understanding Gender: Gender Basics, New Delhi: Women Unlimited 2004
2. Bhasin Kamala, Exploring Masculinity: Gender Basics, New Delhi: Women Unlimited, 2004

3. Bhasin Kamala, What is Patriarchy? : Gender Basics, New Delhi: Women Unlimited, 1993
4. Pernau Margrit Ahmad Imtiaz, Reifeld Hermut (ed.,) Family and Gender: Changing Values in Germany and India, New Delhi: Sage Publications, 2003
5. Agarwal Bina, Humphries Jane and Robeyns Ingrid (ed.,)
6. Capabilities, Freedom, and Equality: Amartya Sen's Work from a Gender Perspective, New Delhi: Oxford University Press, 2006
7. Rajadurai.S.V, Geetha.V, Themes in Caste Gender and Religion, Tiruchirappalli: Bharathidasan University, 2007 Misra Geetanjali, Chandiramani Radhika (ed.,)
8. Sexuality, Gender and Rights: Exploring Theory and Practice in South and Southeast Asia, New Delhi: Sage Publication, 2005 Rao Anupama (ed.,)
9. Gender &Caste: Issues in Contemporary Indian Feminism, New Delhi: Kali for Women, 2003
10. Saha Chandana, Gender Equity and Gender Equality: Study of Girl Child in Rajasthan, Jaipur: Rawat Publications, 2003
11. Krishna Sumi,(ed.,) Livelihood and Gender Equity in Community Resource Management New Delhi: Sage Publication, 2004
12. Wharton .S Amy, The Sociology of Gender: An Introduction to Theory and Research, USA: Blackwell Publishing, 2005.
13. Mohanty Manoranjan (ed.,) Class, Caste, Gender: Readings in Indian Government and Politics- 5, New Delhi: Sage Publications, 2004.
14. Arya Sadhna, Women, Gender Equality and the State, New Delhi: Deep & Deep Publications, 2000.