SRM
INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University u/S 3 of UGC Act, 1956)

UNDER GRADUATE PROGRAMMES

NON-MAJOR (OPEN) ELECTIVE SUBJECTS

CURRICULUM & SYLLABUS
(For students admitted from the academic year 2018-19 onwards)

UNDER CHOICE BASED CREDIT SYSTEM

FACULTY OF SCIENCE AND HUMANITIES
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
SRM NAGAR, KATTANKULATHUR – 603 203

UNDER GRADUATE PROGRAMMES
NON-MAJOR (OPEN) ELECTIVE SUBJECTS
CURRICULUM
(For students admitted from the academic year 2018-19 onwards)
DEPARTMENT OF TAMIL

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULT18E81	அடிப்படைத் தமிழ்-I (Basic Tamil- I)	2	0	0	2	2
	ULT18E82	பயன்பாட்டுத் தமிழ் (Applied Tamil)					
IV	ULT18E83	அடிப்படைத் தமிழ்-II (Basic Tamil- II)	2	0	0	2	2
	ULT18E84	நாடகத் தமிழ் (Tamil Drama)					

DEPARTMENT OF HINDI

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULH18E81	Communication Hindi-I	2	0	0	2	2
	ULH18E82	Basic Hindi-I					
	ULH18E83	Media Lekhan					
IV	ULH18E84	Communication Hindi-II	2	0	0	2	2
	ULH18E85	Basic Hindi-II					
	ULH18E86	Prayojan Mulak Hindi					

DEPARTMENT OF FRENCH

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULF18E81	Communication French-I	2	0	0	2	2
	ULF18E82	Basic French-I					
	ULF18E83	Hotel and Tourism in French-I					
	ULF18E84	Scientific and Technical in French-I					
IV	ULF18E85	Communication French-II	2	0	0	2	2
	ULF18E86	Basic French-II					
	ULF18E87	Hotel and Tourism in French-II					
	ULF18E88	Scientific and Technical in French -II					

DEPARTMENT OF ENGLISH

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULE18E81	Theatre Studies	2	0	0	2	2
	ULE18E82	Creative Writing					
IV	ULE18E83	World Classics	2	0	0	2	2
	ULE18E84	Corporate Communication					

DEPARTMENT OF VISUAL COMMUNICATION

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UVC18E81	Digital Photography	0	1	1	2	2
	UVC18E82	Creative Advertising					
IV	UVC18E83	Creative Drawing	0	1	1	2	2
	UVC18E84	Creative Art					

DEPARTMENT OF COMPUTER APPLICATIONS

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UCA18E81	Office Automation	0	1	1	2	2
	UCA18E82	Web Design					
	UCA18E83	Programming In C					
IV	UCA18E84	Animation	0	1	1	2	2
	UCA18E85	Statistical Package for Social Sciences (SPSS)					
	UCA18E86	Programming in C++					

DEPARTMENT OF COMPUTER SCIENCE

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UCS18E81	Office Automation	0	1	1	2	2
	UCS18E82	Internet Concepts					
IV	UCS18E83	Photoshop	0	1	1	2	2
	UCS18E84	PC Maintenance and Trouble shooting.					

DEPARTMENT OF BIOTECHNOLOGY

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UBT18E81	Mushroom Cultivation	0	1	1	2	2
	UBT18E82	Herbal Medicine	2	0	0	2	2
IV	UBT18E83	Fermentation Technology	0	1	1	2	2
	UBT18E84	Nutrition Through Life Cycle	2	0	0	2	2

DEPARTMENT OF COMMERCE
&
DEPARTMENT OF COMMERCE (A&F and CS)

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UCM18E81	Advertising And Salesmanship	2	0	0	2	2
	UCC18E81	General Commercial Knowledge					
IV	UCM18E82	Creativity and Innovation Management	2	0	0	2	2
	UCC18E82	Indian Banking					

DEPARTMENT OF JOURNALISM AND MASS COMMUNICATION

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UJM18E81	Introduction To International Relations	1	1	0	2	2
	UJM18E82	Writing For Media					
IV	UJM18E83	Advertising	1	1	0	2	2
	UJM18E84	Film Studies					

DEPARTMENT OF FASHION DESIGNING

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UFN18E81	Introduction to Fashion	2	0	0	2	2
IV	UFN18E82	Basic Embroidery	2	0	0	2	2

DEPARTMENT OF BUSINESS ADMINISTRATION

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UBA18E81	Small Business Operation	2	0	0	2	2
	UBA18E82	Rural Marketing					
	UBA18E83	Consumer Affairs					
IV	UBA18E84	Business Organization	2	0	0	2	2
	UBA18E85	E-Marketing					
	UBA18E86	Marketing Research					

DEPARTMENT OF MATHEMATICS

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UMA18E81	Basic Statistics	2	0	0	2	2
	UMA18E82	Basic Mathematics					
IV	UMA18E83	Numerical Methods	2	0	0	2	2
	UMA18E84	Resource Management Techniques					

DEPARTMENT OF PHYSICS

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UPY18E81	Energy Physics	2	0	0	2	2
	UPY18E82	Electrical Appliances					
IV	UPY18E83	Fundamentals Of Nanoscience And Nanotechnology	2	0	0	2	2
	UPY18E84	Electronic Communication					

DEPARTMENT OF CHEMISTRY

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UCY18E81	Biochemistry	2	0	0	2	2
	UCY18E82	Food Chemistry					
IV	UCY18E83	Basics of Bioinformatics	2	0	0	2	2
	UCY18E84	Molecular Modeling & Drug Design					

STUDENT OUTCOMES

Student outcomes describe what students are expected to know and be able to do by the completion of each course. In general, FOURTEEN STUDENT OUTCOMES (a-n) have been identified and the curriculum and syllabus have been structured in such a way that each of the courses meets one or more of these outcomes. These relate to the skills, knowledge, and behaviors that students acquire as they progress through the program. Further each course spells out clear instructional objectives which are mapped on to the student outcomes.

On successful completion of the NME course, students will have the ability to

a) Apply knowledge of basic science, mathematics and computing appropriate to the discipline
b) Acquire knowledge and understanding of fundamental concepts, principles and theories related to the identified subject areas.
c) Acquire advanced knowledge in some areas of interest in related subject and is familiar with contemporary research within various fields.
d) Develop skills of critical thinking, hypothesis building, and to apply the scientific method to related concepts, theoretical models and laboratory experiments.
e) Develop problem solving skill to, independently and creatively, identify and formulate problems and to plan and, use theoretical and/or experimental methods, carry out advanced tasks within specified time limits.
f) Develop the skill to combine and use knowledge from several disciplines to enter/propose novel ideas that require an analytic and innovative approach, and disseminate subject matter and results to both specialists and a broader audience.
g) Use computers effectively to solve problems through numerical methods and simulations and to analyze the data through available software.
h) Handle standard and advanced laboratory equipment, modern instrumentation and classical techniques to carry out experiments.
i) Develop skills to interpret and explain the limits of accuracy of experimental data in terms of significance and underlying theory.
j) *Collaborate and to lead collaborative work* to accomplish a common goal.
k) Understands the role of different courses in the society and have the background to consider ethical, legal and security issues and responsibilities.
l) Demonstrate written and oral communication skills for dissemination of scientific results in report, article, or oral presentation formats.
m) Develop an adequate background for pursuing pedagogic education and international perspective on her/his discipline, and a commitment to life-long learning and professional development.
n) Assist in the creation of an effective project plan.

DEPARTMENT OF TAMIL

பருவம்	பாடக்குறியீடு எண்	பாடத் தலைப்பு	L	T	P	L+T+P	C
III	ULT18E81	**அடிப்படைத்தமிழ்-1** (Basic Tamil- I)	2	0	0	**2**	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		**Student Outcomes**				
1.	இரண்டாயிரம் ஆண்டுகாலத் தமிழின் தொன்மையையும் வரலாற்றையும் அதன் விழுமியங்களையும் பண்பாட்டையும் எடுத்துரைப்பதாக இப்பாடத்திட்டம் அமைக்கப் பட்டுள்ளது.	**E**	**F**	**H**	**M**	**N**
2.	காலந்தோறும் தமிழ் இலக்கியம் உள்ளடக்கத்திலும், வடிவத்திலும் பெற்ற மாற்றங்கள், அதன் சிந்தனைகள், அடையாளங்கள் ஆகியவற்றை காலந்தோறும் எழுதப்பட்ட இலக்கியங்களின் வழியாகக் கூறுவதாகவும், மொழியின் கட்டமைப்பைப் புரிந்து கொள்வதாகவும் பாடத்திட்டம் வடிவமைக்கப்பட்டுள்ளது.	**E**	**F**	**H**	**N**	
3.	வாழ்வியல் சிந்தனைகள், ஒழுக்கவியல் கோட்பாடுகள், சமத்துவம், சூழலியல் எனப் பல கூறுகளை மாணவர்களுக்கு எடுத்துரைக்கும் விதத்தில் இப்பாடத்திட்டம் உருவாக்கப்பட்டுள்ளது.	**E**	**F**	**D**	**N**	

அலகு-1: எழுத்துகள் அறிமுகம்- உயிர் எழுத்து-குறில்-நெடில், மெய்யெழுத்து- வல்லினம், மெல்லினம், இடையினம்- உயிர்மெய்யெழுத்து-ஆய்தயெழுத்து, தமிழ் எண்கள்.

அலகு-2: சொற்கள் கற்றல்- ஓரெழுத்து சொற்கள், ஈரெழுத்து சொற்கள்- தொடர் மொழி- ஒருமை-பன்மை—இறந்தகாலம், நிகழ்காலம், எதிர்காலம்

அலகு -3: எழுதும் பயிற்சி – ஒலிவேறுபாட்டால் பொருள் மாற்றம்- ர-ற,- ல-ழ-ள, ண-ந-ன,

அலகு -4: சிறுதொடர் கற்றல்- எழுவாய், பயனிலை, செயப்படுபொருள் அமைய சிறு தொடர்கள் உருவாக்குதல்.

அலகு -5: வழக்குச் சொற்கள்- உறவுப் பெயர்கள், காய்கள், பழங்கள், நிறங்கள், கிழமைகள், மாதங்கள், உடல் உறுப்புகள்.

பார்வை நூல்கள்:

1. முனைவர் எஸ்.தியாகமணி, அடிப்படைத் தமிழ், கருணா பதிப்பகம், வேலூர், 2012.
2. அ.கி.பரந்தாமனார், நல்ல தமிழ் எழுத வேண்டுமா?, அல்லி நிலையம், 2010.
3. எம். ஏ நுஃமான், அடிப்படைத் தமிழ் இலக்கணம், வாசகர் சங்கம், 2000.
4. இரா. தமிழ்ப்பிரியன், அனைவருக்கும் பயன் தரும் அடிப்படைத் தமிழ் இலக்கணம், நற்பவி பிரசுரம், 2008.

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

பருவம்	பாடக்குறியீடு எண்	பாடத் தலைப்பு	L	T	P	L+T+P	C
III	ULT18E82	**பயன்பாட்டுத் தமிழ்** (Applied Tamil)	2	0	0	**2**	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		**Student Outcomes**				
1.	இரண்டாயிரம் ஆண்டுகாலத் தமிழின் தொன்மையையும் வரலாற்றையும் அதன் விழுமியங்களையும் பண்பாட்டையும் எடுத்துரைப்பதாக இப்பாடத்திட்டம் அமைக்கப் பட்டுள்ளது.	**e**	**f**	**H**	**M**	**N**
2.	காலந்தோறும் தமிழ் இலக்கியம் உள்ளடக்கத்திலும், வடிவத்திலும் பெற்ற மாற்றங்கள், அதன் சிந்தனைகள், அடையாளங்கள் ஆகியவற்றை காலந்தோறும் எழுதப்பட்ட இலக்கியங்களின் வழியாகக் கூறுவதாகவும், மொழியின் கட்டமைப்பைப் புரிந்து கொள்வதாகவும் பாடத்திட்டம் வடிவமைக்கப்பட்டுள்ளது.	**e**	**F**	**d**		
3.	வாழ்வியல் சிந்தனைகள், ஒழுக்கவியல் கோட்பாடுகள், சமத்துவம், சூழலியல் எனப் பல கூறுகளை மாணவர்களுக்கு எடுத்துரைக்கும் விதத்தில் இப்பாடத்திட்டம் உருவாக்கப்பட்டுள்ளது.	**e**	**f**	**n**		

அலகு-1: அகரவரிசைப்படுத்துதல்- கலைசொல்லாக்கம்-பிழை நீக்கியெழுதுதல்

அலகு-2: கற்றல் திறன்கள் **–** கேட்டல், எழுதுதல், படித்தல், பேசுதல்

அலகு-3: எழுத்தாற்றல்- கடிதம்- கட்டுரை எழுதுதல்

அலகு-4: படைப்பாற்றல்- கதை- கவிதை- படைத்தல்

அலகு-5: மொழிபெயர்ப்பு- மரபுத்தொடர்

பார்வை நூல்கள்:

1. க.இராமச்சந்திரன், பயன்பாட்டுத்தமிழ் இலக்கணம், குமரன் பதிப்பகம், 2012.
2. இரா. தமிழ்ப்பிரியன், அனைவருக்கும் பயன் தரும் அடிப்படைத் தமிழ் இலக்கணம், நற்பவி பிரசுரம், 2008.
3. கோ பெரியண்ணன், அடிப்படை எளிய தமிழ் இலக்கணம், வனிதா பதிப்பகம், 2003.

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

பருவம்	பாடக்குறியீடு எண்	பாடத் தலைப்பு	L	T	P	L+T+P	C
IV	ULT18E83	**அடிப்படைத்தமிழ்-2** (Basic Tamil- II)	2	0	0	**2**	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		**Student Outcomes**				
1.	இரண்டாயிரம் ஆண்டுகாலத் தமிழின் தொன்மையையும் வரலாற்றையும் அதன் விழுமியங்களையும் பண்பாட்டையும் எடுத்துரைப்பதாக இப்பாடத்திட்டம் அமைக்கப் பட்டுள்ளது.	**e**	**f**	**H**	**M**	**N**
2.	காலந்தோறும் தமிழ் இலக்கியம் உள்ளடக்கத்திலும், வடிவத்திலும் பெற்ற மாற்றங்கள், அதன் சிந்தனைகள், அடையாளங்கள் ஆகியவற்றை காலந்தோறும் எழுதப்பட்ட இலக்கியங்களின் வழியாகக் கூறுவதாகவும், மொழியின் கட்டமைப்பைப் புரிந்து கொள்வதாகவும் பாடத்திட்டம் வடிவமைக்கப்பட்டுள்ளது.	**e**	**F**	**d**		
3.	வாழ்வியல் சிந்தனைகள், ஒழுக்கவியல் கோட்பாடுகள், சமத்துவம், சூழலியல் எனப் பல கூறுகளை மாணவர்களுக்கு எடுத்துரைக்கும் விதத்தில் இப்பாடத்திட்டம் உருவாக்கப்பட்டுள்ளது.	**e**	**f**	**n**		

அலகு-1: சொல் வகைகள்- பெயர், வினை, இடை, உரி.

அலகு-2: பெயரடை, வினையடை, பெயரெச்சம், வினையெச்சம்

அலகு-3: ஒரு சொல் பல பொருள்- பல சொல் ஒரு பொருள்

அலகு-4: நீதிப்பாடல்கள்- ஆத்திச்சூடி-ஔவையார், பாரதியார், கதைகள்

அலகு-5: மொழிபெயர்ப்பு- ஆங்கிலத்திலிருந்து தமிழுக்கு சொற்கள் மற்றும் சிறு வாக்கியங்களை மொழிபெயர்த்தல்.

பார்வை நூல்கள்:

1. முனைவர் எஸ்.தியாகமணி, அடிப்படைத் தமிழ், கருணா பதிப்பகம், வேலூர், 2012.
2. அ.கி.பரந்தாமனார், நல்ல தமிழ் எழுத வேண்டுமா?, அல்லி நிலையம், 2010.
3. எம். ஏ நுஃமான், அடிப்படைத் தமிழ் இலக்கணம், வாசகர் சங்கம், 2000.
4. இரா. தமிழ்ப்பிரியன், அனைவருக்கும் பயன் தரும் அடிப்படைத் தமிழ் இலக்கணம், நற்பவி பிரசுரம், 2008.

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

பருவம்	பாடக்குறியீடு எண்	பாடத் தலைப்பு	L	T	P	L+T+P	C
IV	ULT18E84	**நாடகத் தமிழ்** (Tamil Drama)	2	0	0	**2**	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		**Student Outcomes**				
1.	இரண்டாயிரம் ஆண்டுகாலத் தமிழின் தொன்மையையும் வரலாற்றையும் அதன் விழுமியங்களையும் பண்பாட்டையும் எடுத்துரைப்பதாக இப்பாடத்திட்டம் அமைக்கப் பட்டுள்ளது.	**e**	**f**	**H**	**M**	**N**
2.	காலந்தோறும் தமிழ் இலக்கியம் உள்ளடக்கத்திலும், வடிவத்திலும் பெற்ற மாற்றங்கள், அதன் சிந்தனைகள், அடையாளங்கள் ஆகியவற்றை காலந்தோறும் எழுதப்பட்ட இலக்கியங்களின் வழியாகக் கூறுவதாகவும், மொழியின் கட்டமைப்பைப் புரிந்து கொள்வதாகவும் பாடத்திட்டம் வடிவமைக்கப்பட்டுள்ளது.	**e**	**F**	**d**		
3.	வாழ்வியல் சிந்தனைகள், ஒழுக்கவியல் கோட்பாடுகள், சமத்துவம், சூழலியல் எனப் பல கூறுகளை மாணவர்களுக்கு எடுத்துரைக்கும் விதத்தில் இப்பாடத்திட்டம் உருவாக்கப்பட்டுள்ளது.	**e**	**f**	**n**		

அலகு: 1 நாடகத் தோற்றுவாய்: நாடகம் – அறிமுகம், தொல்காப்பியம் – எட்டுவகை மெய்ப்பாடுகள், கூத்துமரபு.

அலகு: 2 நாடக வளர்ச்சி வரலாறு:சிலப்பதிகாரத்தில் நாடகக் கூறுகள், பிற்காலச் சோழர் கால நாடகங்கள், பள்ளு, குறவஞ்சி நாடக வகைகள்

அலகு: 3 பத்தொன்பதாம் நூற்றாண்டு நாடக மரபு: முறைப்படுத்தப்பட்ட நாடகங்கள் – மேடை நாடக அமைப்பு, நாடக ஆசிரியர்கள் - சங்கரதாஸ் சுவாமிகள், பம்மல் சம்பந்த முதலியார், நாடக வகைகள் – வரலாறு, விடுதலை, சமூகம், விழிப்புணர்வு.

அலகு: 4 நவீன நாடக மரபும் குழுக்களும்:

அ) ந.முத்துசாமி – கூத்துப்பட்டறை

ஆ) பிரளயன் – சென்னைக் கலைக்குழு

இ) ஞாநி – பரீக்ஷா

ஈ) அ.மங்கை – மரப்பாச்சி.

உ) வேலுசரவணன் – ஆழி குழந்தைகள் நாடகக்குழு.

அலகு: 5 நாடகப் பனுவல்கள்

அ) மாண்டவர் மீண்டது – பம்மல் சம்பந்த முதலியார்

ஆ) மனசின் அழைப்பு – அரவாணிகள்

பார்வை நூல்கள்:

1. தமிழ்நாடகம் - நேற்று இன்று நாளை, முனைவர் மு. இராமசுவாமி, ருத்ரா பதிப்பகம், தஞ்சாவூர், 1998.
2. தமிழ் நாடகம் - நேற்றும் இன்றும், கு. பகவதி (பதிப்பு.), உலகத் தமிழாராய்ச்சி நிறுவனம், சென்னை, 2000.
3. தமிழில் நாடகப் பதிவுகள், சி. அண்ணாமலை, காவ்யா, சென்னை, 2004.
4. தமிழில் நவீன நாடகம், கா. சிவத்தம்பி, உலகத் தமிழாராய்ச்சி நிறுவனம், சென்னை, 1996.

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

DEPARTMENT OF HINDI

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULH18E81	Communication Hindi - I	2	0	0	**2**	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To encourage greater written skills through comprehension writing and composition writing	E	F	H	M	N
2.	Improve their oral and written skills through a combination of theory and practice.	E	F			

UNIT – I
1. Akshar Gyan
2. Swar Vyanjan

UNIT – II
1. Rozmara ke prayog me aane vale Shabd
2. Kriyatmak Shabd (Action Word)
3. Samanya Baatcheet (Conversation about Food)

UNIT – III
1. Rangon ke Naam (Names of the colors)
2. Baatcheet (Conversation in the Vegetable Market)

UNIT – IV
1. Hindi Ginti
2. Baatcheet (Conversation About Food)

UNIT – V
1. Sharir ke angh (Parts of the Body)

Reference:
Hindi Me Bolo –Dr. Anjana Sandhir

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULH18E82	Basic Hindi – I	2	0	0	**2**	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To encourage greater written skills through comprehension writing and composition writing	E	F	H	M	N
2.	Improve their oral and written skills through a combination of theory and practice.	E	F			

UNIT-I

Hindi Alphabet (Swar, Vyanjan aur Barah Khadi)

UNIT-II

Swar aur Vyanjan se bane Sabd.

UNIT –III

Samanya Sabd:

1. Phalon ke Naam (5Words)
2. Sabjiyon ke Naam (5 Words)
3. Rango Ke Naam (5Words)
4. Saptaha Ke Naam (5 Words)
5. Mahino ke Naam (5Words)
6. Sharir Ke ango k Naam(5 Words)
7. Rishton Ke Naam(5 Words)
8. Aakar
9. Swaad
10. Quantity

UNIT –IV

1. Ginti (1-20 Numbers)

Unit –V

2. Action Words
3. Teaching Method: 1. PowerPoint Presentation, Teaching Aid.

References:

1. Learn Hindi & Hindi Film Songs (Author : Dr. Anjana Sandhir)
2. Dictionary (Hardev Bahari, Rajpal &Son ,Dwarka Prasad, Rajkamal Prakashan)

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULH18E83	Media Lekhan	2	0	0	**2**	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		**Student Outcomes**				
1.	Extend and expand their savoir-faire through the acquisition of latest skills and techniques by practical training	**E**	**f**	**H**	**M**	**N**
2.	Improve their oral and written skills through a combination of theory and practice.	**E**	**F**			

UNIT -I
1. Media Ka Swarup aur Parkar
2. Print Media Aur Lekhan

UNIT -II
1. Drishya Media Aur Lekhan
2. Sravya Media Aur Lekhan

UNIT - III
1. Sub-Title Lekhan

UNIT -IV
1. Swandh Lekhan

UNIT -V
1. Nara Lekhan
2. Less theory more practical
3. Reference Book :
4. Pathkatha Lekhan (Author : Manohar S.Joshi)
5. Katha-Pathkatha (Author : Mannu Bhandari)
6. Television Lekhan (Author : Asgar Wajhat)

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	ULH18E84	Communication Hindi – II	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	Extend and expand their savoir-faire through the acquisition of latest skills and techniques by practical training	E	f	H	M	N
2.	Improve their oral and written skills through a combination of theory and practice.	E	F			

UNIT – I
Greetings
1. Personal Introduction
2. Simple Conversation
3. Introducing a friend

UNIT -II
Name of the Week Days
1. Names of the month

UNIT –III
Names of Vegetables
1. conversation ; In the Vegetable Market.

UNIT –IV
Names of Fruits
1. Dry Fruits
2. Conversation : In a Fruit Shop

UNIT –V
Family and Relatives
1. Family Tree
2. My Family

Reference :
1. Hindi Me Bolo –Dr. Anjana Sandhir, Parshwa Publication, Edition ,2003

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	ULH18E85	Basic Hindi –II	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	Extend and expand their savoir-faire through the acquisition of latest skills and techniques by practical training.	E	f	H	M	N
2.	Consolidate the knowledge of theoretical aspects of grammar with examples provided from different angles: from present day literature, day to day conversation.	E	F			

UNIT-I
1. Sabdharth
2. Paryayavachi Sabd
3. Vilom Sabd

UNIT -II
1. Muhuvara
2. Lokokaktyan

UNIT -III
1. Chitr Dwara Spast karna
2. Sawa Parichay

UNIT -IV
1. Anek ke lye ek Sabd
2. Ek din Ek Shabd

UNIT –V
1. Kavita

Reference:

1. Hindi Vyakran (SHABD AUR AARTH –Author- Hardev Bahari)
2. Dictionary (Hardev Bahari, Rajpal &Son ,Dwarka Prasad, Rajkamal Prakashan)

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	ULH18E86	Prayojan Mulak Hindi	2	0	0	2	2

	INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:	Student Outcomes				
1.	To encourage greater written skills through comprehension writing and composition writing	E	f	H	M	N
2.	Extend and expand their savoir-faire through the acquisition of latest skills and techniques by practical training.	E	F			

UNIT -I

1. Prayojan Mulak Hindi –Paribhasha Swarup aur Kshetra
2. Prayojan Mulak Hindi aur Anuvad ka Anthasambandh

UNIT – II

1. Patr Vyavhar

UNIT – III

1 Prayojan Mulak Hindi Aur Paribhashik Shabdavali

Unit – IV

1. Prashashanik Hindi
2. Vaanijiyik Hindi

UNIT – V

1. Hindi Computing
2. Less theory more practical

Reference:

1. Prayojan Mulak Hindi – Dr. Ramprakash aur Dinesh Gupta
2. Computer Aur Hindi – Harimohan

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

DEPARTMENT OF FRENCH

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULF18E81	Communication French-I	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To encourage greater written skills through comprehension writing and composition writing.	e	f	h	M	N
2.	Improve their oral and written skills through a combination of theory and practice.	e	F			
3.	Extend and expand their savoir-faire through the acquisition of latest skills and techniques by practical training.	e	f			

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Unité-I

La conversation - Comme la première rencontre - Ex: Bonjour, comment ça va ? etc. - Les jours de la semaine - Les mois de l'année

Unité-II

(i) Quel jour est-ce-aujourd'hui? ii) La conversation de logement - La salutation - (iii) La conversation - Vous êtes marié ?

Unité-III

(i) Les numéros 1 jusqu'a 10 - (ii) Les numéros 11 jusqu'a 100 - (iii) La conversation de la nationalité

Unité-IV

La conversation de la profession - La conversation du weekend habitual- La conversation du weekend passé- Ma famille

Unité-V

Demander les informations – Quelqu'un, Quelque chose – Demander les choses – Demander les prix.

Référence Livre :

1. " **Zoom 1**", Catherine Jonville, Jean-Français Moulière, Manuela Ferreira Pinto, Jocelyne Quinson, Edition Maison Des Langues, Paris
2. "**Synchronie**" K.Madanagobalane, Goyal Publication & Dustribution, 2011, Chennai.
3. "**Le kiosque''** Céline Himber, Charlotte Rastello, Fabienne Gallon, Hachette, 2014,Paris,

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULF18E82	Basic French-I	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To encourage greater written skills through comprehension writing and composition writing	e	f	h	M	N
2.	Improve their oral and written skills through a combination of theory and practice.	e	F			
3.	Extend and expand their savoir-faire through the acquisition of latest skills and techniques by practical training.	e	f			

Unité-I

Bienvenue! – Saluer – se présenter- identifier quelqu'un – Epeler un prénom en français – identifier des sons et des mots français

Unité-II

Bonjour ! – Saluer – se Présenter/Présenter quelqu'un – Dire et Demander comment ca va – Remercier – identifier un objet

Unité-III

C'est la fête ! – Dire et Demander son âge – compter jusqu'à 10- Présenter sa famille – Dire et Demander ce que l'on aime ou pas

Unité-IV

A l'école – Dire et demander ce que l'on possède – Situer des objets – Exprimer ses gouts – Compter jusqu'à 20

Unité-V

Poser les questions – Demander les choses et les prix – les états les capitales en France – Les Usines en France

Référence Livre ;

1. " Zoom 1" , Catherine Jonville, Jean-Français Moulière, Manuela Ferreira Pinto, Jocelyne Quinson, Edition Maison Des Langues, Paris.

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULF18E83	Hotel and Tourism in French-I	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To encourage greater written skills through comprehension writing and composition writing	e	f	h	M	N
2.	Improve their oral and written skills through a combination of theory and practice.	e	F			
3.	Extend and expand their savoir-faire through the acquisition of latest skills and techniques by practical training.	e	f			

Unité-I

À l'hôtel Minakshi, Les pronoms sujets, les pronoms toniques, Les *verbes : être, avoir, s'appeler, parler, apprendre* ; les articles définis au singulier, *c'est* + nom/pronom/pronom tonique, l'interrogation-intonation, la négation, les adjectifs possessifs (*mon, ma*), les prépositions de lieu (*à, pour*)

Unité-II

Je suis vraiment vexé !, Les noms, les articles définis & indéfinis, les adjectifs interrogatifs, les adjectifs possessifs au singulier, *il y* a, verbes en *er* (*parler, aimer, chercher*), verbes en *ir,* verbes : *venir, connaître, faire*, les articles contractés avec *à* et *de*, les expressions du lieu, l'adjectif qualificatif, l'interrogation-intonation, la négation-*ne…pas*

Unité-III

Au restaurant, *Les verbes : travailler, aller, lire, apprendre ; les expressions du temps : souvent, depuis ; c'est+adjectif ; l'interrogation : intonation & est-ce que ; faire du/de la ; L'affirmation-la négation*

Unité-IV

Des renseignements, Les adjectifs démonstratifs, les verbes : *prendre, acheter, voir, devoir*, les expressions du lieu

Unité-V

Régler la note, Les verbes au présent de l'indicatif: *vouloir, pouvoir, mettre, boire*, le passé composé, l'impératif, les articles partitifs, la possession-les adjectifs possessifs, les expressions de la quantité, les expressions du temps

Référence Livre :

1. **"L'Hôtellerie et le tourisme**", Samhita Publications, Chennai, 2015

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULF18E84	Scientific and Technical in French -I	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To encourage greater written skills through comprehension writing and composition writing	e	f	h	M	N
2.	Improve their oral and written skills through a combination of theory and practice.	e	F			
3.	Extend and expand their savoir-faire through the acquisition of latest skills and techniques by practical training.	e	f			

Unité - I

La science dans le monde – Nom de scientifique célèbres – comprendre et rédiger une courte biographie – Présenter un scientifique – Les matières et types de cours – Les spécialités scientifiques

Unité - II

Une expo à la cité des sciences – Les lieux de sorties – quelques termes scientifiques – Les termes de l'exposition – Les expression familières pour accepter une invitation

Unité - III

Un diner bien français – Les habitudes alimentaires – La cuisine française – La nourriture – Les ingrédients - Les expressions de quantité – Les expressions familières avec les noms de fruits et légumes

Unité - IV

On se voit au colloque – Les fêtes et jours féries français – Les expressions pour proposer une invitation

Unité-V

La science en application – un peu de culture générale scientifique – Quelques noms de grandes entreprises – Le secteur privé et public de la recherche – Le processus de fabrication de quelques éléments – Les expression pour parler d'un projet

Référence Livre:

1. **"Tech French"**, Ingrid Le Gargasson, Shariva Naik and Claire Chaize, 2011, Goyal Publisher

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	ULF18E85	Communication French-II	2	0	0	**2**	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To encourage greater written skills through comprehension writing and composition writing	e	f	h	M	N
2.	Consolidate the knowledge of theoretical aspects of French grammar with examples provided from different angles: from present day literature, day to day conversation.	e	F			
3.	Extend and expand their savoir-faire through the acquisition of latest skills and techniques by practical training.	e	f			

Unité-I
La conversation de la famille - La présentation - L'alphabet

Unité-II
La phonétique - Les sons avec les exemples - Les exemples de sons

Unité-III
La liaison avec les exemples - L'entrainement de lire avec les textes

Unité-IV
L'entrainement de lire avec le texte 2 - L'épreuve finale

Unité-V
Les relations de la famille – L'arbre de famille – Les images et les couleurs – Les adjectifs – Accord du nom.

Référence :

1. " **Zoom 1**", Catherine Jonville, Jean-Français Moulière, Manuela Ferreira Pinto, Jocelyne Quinson, Edition Maison Des Langues, Paris
2. "**Synchronie**" K.Madanagobalane, Goyal Publication & Dustribution, 2011, Chennai.
3. "**Le kiosque'**' Céline Himber, Charlotte Rastello, Fabienne Gallon, Hachette, 2014, Paris.

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	ULF18E86	Basic French-II	2	0	0	**2**	2

	INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:	Student Outcomes				
1.	To encourage greater written skills through comprehension writing and composition writing	e	f	h	M	N
2.	Consolidate the knowledge of theoretical aspects of French grammar with examples provided from different angles: from present day literature, day to day conversation.	e	F			
3.	Extend and expand their savoir-faire through the acquisition of latest skills and techniques by practical training.	e	f			

Unité-I

Soirée Pyjama ! – Dire et Demander ce que l'on veut – Proposer une activité – Exprimer des sentiments et des sensations – Dire et Demander de situer une personne ou un objet

Unité-II

A la cantine – Donner/Comprendre un ordre – Demander quelque chose – Exprimer des besoins – Exprimer des gouts

Unité-III

En colonie de vacances- décrire physiquement quelqu'un – Exprimer des sensations – Dire et Demander les activités après l'école

Unité-IV

Demander les prix et les informations - Les matières – Les situations- poser les questions et les informations

Unité-V

Demander les choses – Les matériaux –Rédiger un dialogue pour utiliser les mots-Ordre les phrases.

Référence :

1. " Zoom 1", Catherine Jonville, Jean-Français Moulière, Manuela Ferreira Pinto, Jocelyne Quinson, Edition Maison Des Langues, Paris

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	ULF18E87	Hotel and Tourism in French-II	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	Improve their oral and written skills through a combination of theory and practice.	E	F	H	M	N
2.	Consolidate the knowledge of theoretical aspects of French grammar with examples provided from different angles: from present day literature, day to day conversation.	E	F			

Unité-I

À l'agence de voyages, Le comparatif, les prépositions de lieu, les adjectifs qualificatifs (pluriel et place des adjectifs), *il faut*+nom, le passé composé, les constructions avec l'infinitif, le verbe *penser*, les expressions avec *avoir*.

Unité-II

Visite de Madurai. Les pronoms compléments d'objet direct, les pronoms compléments d'objet indirect

Unité-III

À Mahabalipuram, Le futur, les verbes au présent : *partir, revenir*, les expressions d'enchaînement, le futur proche, les pronoms compléments d'objet direct, *dès que*, le négatif : *ne…ni…ni*, la restriction : ne…que - Le verbe *savoir*, le passé composé avec *être*, les verbes pronominaux, l'interrogation-inversion du sujet

Unité-IV

À Agra, Impératif- *savoir*, avoir, *être*. Pronom *en.* Le Passé Composé

Unité-V

À Varanasi, Adverbes, mots interrogatifs. Faire du…., La condition avec *SI*

Référence Livre :

''L'Hôtellerie et le tourisme " Samhita Publications, Chennai, 2015

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	ULF18E88	Scientific and Technical in French -II	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To encourage greater written skills through comprehension writing and composition writing	e	f	h	M	N
2.	Improve their oral and written skills through a combination of theory and practice.	e	F			
3.	Extend and expand their savoir-faire through the acquisition of latest skills and techniques by practical training.	e	f			

Unité-I

TP de chimie – Un TP au laboratoire – La chimie : Les Eléments chimiques et le matériel – La formulation des équations chimiques – Le corps humain -

Participer à un projet de groupe – Les projets de groupe en classe – Les transports en commun – Les transports en commun

Unité-II

Résoudre un exercice de maths – Les signes et formulations mathématiques – Les verbes utilisés dans les exercices de mathématiques -

Parcours de jeunes ingénieurs – Le parcours académique – Le monde du travail

Unité-III

Au cœur des télécommunications : cours sur « la fibre optique » - Le contexte du cours en France – La fibre optique – Les adjectifs descriptifs

Unité-IV

La méthode de l'exposé et les énergies renouvelables – La principe de l'exposé – L'exposé – Les énergies renouvelables - **Le tri, mais pour quoi faire ?** L'écologie, le tri sélectif et le recyclage en France – Le déchets, le recyclage et le tri – Les emballages

Unité-V

Des ondes dans le cerveau – Les jeux vidéo en France – L'informatique – L'ordinateur et ses périphériques

Référence Livre :

1. **"Tech French"**, Ingrid Le Gargasson, Shariva Naik and Claire Chaize, 2011, Goyal Publisher

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

DEPARTMENT OF ENGLISH

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULE18E81	Theatre Studies	2	0	0	**2**	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To train students to direct and current plays.	E	F	H	M	N
2.	To train students in different forms of acting.	E	F	D		

UNIT - I

(i) Introduction to Practical Theatre ii) Folk an Traditional act

UNIT - II

(i) Inter relation between Body, Mind and Soul ii) Design- Graphics and Plastic Arts iii) Direction iv) Making Masks to make up

UNIT-III

(i) Hayavadana ii) Monkey's Paw iii) The Death of an Anarchist iv) Street Car named Desire

UNIT - IV

The dynamism of scripting- An introduction to the art of scripting plays -the basics

UNIT - V

Practical Theatre- The whole class will be part of it and direct few acts on stage

Reference:

1. Greek Theatre Performance - David Willes, Cambridge University Press, 1999
2. Some aspects of Sanskrit drama and dramaturgy, S.S. Janaki- The Kuppuswamy Sastri Research Institute, Mysore University , 2009

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	ULE18E82	Creative Writing	2	0	0	**2**	2

	INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:	Student Outcomes				
1.	To enable the students to explore their creativity	E	F	H	M	N
2.	To make the students aware of the possible avenues in the field of writing	E	F	D		

UNIT - I

PROSE i) Descriptive writing ii) Argumentative Writing iii Subjective Writing

UNIT - II

POETRY Subjective – Sonnet – Ode – Lyrics – Free Verses Objective – Ballad – Epics

UNIT - III

DRAMATICS - Drama – Writing Television Scripts- Writing for Radio – Video Scripts

UNIT - IV

OTHER WRITINGS - Journalistic – Narrative – Short Stories – Novels – Writing for Media - Event Coverage

UNIT - V

The Art of Letter Writing – Letters of World leaders – eminent writers- differences between personal and official letters

References:

1. Wilson, Maja. Rethinking Rubrics in Writing Assessment. Heinemann, 2006.
2. Wolitzer, Hilma. The Company of Writers. Penguin, 2001.

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	ULE18E83	World Classics	2	0	0	2	2

	INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:	Student Outcomes				
1.	To introduce the students to World Literature and Classics.	e	f	H	M	N
2.	To allow students to understand the essence of Classical Literature.	e	F	d		
3.	Cultivate creativity and idealism.	e	f	d		

UNIT - I
Translations of Ramayana (Valmiki or Kambar)

UNIT - II
The Odyssey by Homer (selected chapters)

UNIT - III
Ibsen's 'Doll's House' Kalidasa's Shakunthala

UNIT - IV
Plutarch's Life

UNIT - V
Sangam poems

References:

1. Homer. The Odyssey, Translated by Robert Fagles. New York: Penguin Books, 1996
2. Henrik Ibsen's 'Doll's House', Dover Thrift edition, Dover Publications, 1992

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	ULE18E84	Corporate Communication	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To enhance students' proficiency in English language.	e	f	H	M	N
2.	To enable the students to think in English and communication in English.	e	F	d		
3.	To equip students for employment in corporate companies.	e	f	d		
4	To engage in ongoing professional development	e	f	d		

UNIT - I

Introduction- English as a global language- English as the First and Second language- Uses of English in corporate sector.

UNIT - II

Difference between Curriculum Vitae, Resume, Personal profile and Institutional profile- Report writing- Email drafting and Etiquettes- Preparing agenda and writing minutes for meetings and proceedings

UNIT - III

Fluency in oral communication- Appropriate use of register, style and body language- Verbal and Non- Verbal communication- Barriers in Communication- Types and preparations of interviews

UNIT - IV

Project – Report writing on real time event- Oral presentation - public speaking – Social awareness

UNIT - V

Preparing and Presenting of Seminars- Conducting interviews. (How to prepare questionnaire for the interview)

References:

1. Cees B.M. Van Riel & Charles J. Fombrum. 'Essentials of Corporate Communication'. Oxon. Routledge publication, 2007.
2. Ur. Penny (1991). 'A Subject in Language Teaching.' Cambridge University Press. 2007, New York

Course Nature : **Theory**							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

DEPARTMENT OF VISUAL COMMUNICATION

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UVC18E81	Digital Photography	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To acquire knowledge about basics of photography	a	c			
2.	To strengthen the knowledge on structures, arrays etc., of digital photography	a	b	i		
3.	To develop program using the features in digital photography	a	c	i		

CLASS EXERCISE:

(Students has to practices all FIVE exercises) (Each exercise carries 8 marks)
(Five exercises x 8 marks = 40 marks & 10 marks for Regularity & Discipline- Total-50 Marks)

1. Landscape (Scenic, People & Monuments) (minimum 1 excises)
2. Portraits (minimum 1 excises)
3. Environnemental Exposure (minimum 1 excises)
4. Silhouette (minimum 1 excises)
5. Freezing movement (minimum 1 excises)

(The Students have to submit all exercises as Record Work for Practical exam, which will be evaluated by the External Examiner)

MANUALS FOR PRACTICALS

1. Ben Long (2010). Complete Digital Photography, First Edition, Course Technology PTR, USA.
2. Michael Langford (2008). Advanced Photography, Second Edition, Focal Press, UK.
3. Michael Langford (2000). Basic Photography, Second Edition, Focal Press, UK.

Course Nature: Practical				
Assessment Method (Max. Marks: 100)				
In Semester	Assessment Tool	Studio/ Lab	Regularity and Discipline	Total
	Marks	40	10	50
End Semester	Assessment Tool	Record Work	Viva	Total
	Marks	30	20	50
Total				100

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UVC18E82	Creative Advertising	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To acquire knowledge about basics of advertising	a	c			
2.	To strengthen the knowledge on structures, arrays etc., of creative advertising	a	b	i		
3.	To develop program using the features in creative advertising	a	c	i		

CLASS EXERCISE:

(Students have to practices all FIVE exercises) (Each exercise carries 8 marks)
(Five exercises x 8 marks = 40 marks & 10 marks for Regularity & Discipline- Total-50 Marks)

1. Selection of product
2. Research
3. Budgeting
4. Choosing creative
5. Design and content

RECORD WORK:

1. The student has to prepare the project with the AIDA model.

(The Students have to submit all exercises as Record Work for Practical exam, which will be evaluated by the External Examiner)

MANUALS FOR PRACTICALS

1. George E Belch (2010). Advertising and Promotion, First Edition, Tata McGraw Hill company Ltd., New Delhi
2. J.V. Vilanilam (2004). Advertising Basics A Resource Guide for Beginners, Second Edition, Jain Books, New Delhi
3. David Ogilvy (1985). Ogilvy on Advertising, Fifth Edition, Random House, USA

Course Nature: Practical				
Assessment Method (Max. Marks: 100)				
In Semester	Assessment Tool	Studio/ Lab	Regularity and Discipline	Total
	Marks	40	10	50
End Semester	Assessment Tool	Record Work	Viva	Total
	Marks	30	20	50
Total				100

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UVC18E83	Creative Drawing	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To acquire knowledge about basics of drawing	a	c			
2.	To strengthen the knowledge on structures, arrays etc., of creative drawing	a	b	i		
3.	To develop program using the features in creative drawing	a	c	i		

Class Exercise

(Students have to practices all FIVE exercises) (Each exercise carries 8 marks)
(Five exercises x 8 marks = 40 marks & 10 marks for Regularity & Discipline- Total-50 Marks)

1. **Pencil Sketch, Light & Shadow Practice** : 2 Weeks
   Minimum 4 class works : Record works-2 nos
2. **Geometrical Shapes with different forms** : 2½ Weeks
   Minimum 4 class works : Record works-1 nos.
3. **Texture on Pattern** : 2½ Weeks
   Minimum 4 class works : Record works-2 nos.
4. **Composition with Light and Shadow** : 2½ Weeks
   Minimum 4 class works : Record works-1 nos.
5. **Perspective Drawing** : 2½ Weeks
   Minimum 4 class works : Record works-1 nos.

(**Each exercise should have minimum 1 number of works with rough Thumbnail sketch followed by fair works)**

(The Students have to submit all exercise as Record Work for Practical exam, which will be evaluated by the External Examiner)

MANUALS FOR PRACTICALS

1. John Montague (2013). Basic Perspective Drawing- A Visual Approach, First Edition, John Wiley & Sons, New Jersey
2. William F Powell (2012). Art of Basic Drawing, First Edition, Walter Foster Creative Team, New York
3. Christopher Hart (2012), Basic Drawing made Amazingly Easy, First Edition, Crown Publishing Group, New York

Course Nature: Practical				
Assessment Method (Max. Marks: 100)				
In Semester	Assessment Tool	Studio/ Lab	Regularity and Discipline	Total
	Marks	40	10	50
End Semester	Assessment Tool	Record Work	Exam	Total
	Marks	20	30	50
Total				100

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UVC18E84	Creative Art	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To acquire knowledge about basics of art	a	c			
2.	To strengthen the knowledge on structures, arrays etc., of creative art	a	b	i		
3.	To develop program using the features in creative art	a	c	i		

Class Exercise

(Students have to practices all FIVE exercises) (Each exercise carries 8 marks)
(Five exercises x 8 marks = 40 marks & 10 marks for Regularity & Discipline- Total-50 Marks)

1. **Basic Drawing- Pencil Sketch, Light & Shadow Practice** : 2 Weeks
   Minimum 2 class works : Record works- 2 nos
2. **Still Life- Different Shapes** : 2½ Weeks
   Minimum 2 class works : Record works- 1 nos.
3. **Shape Making & Colouring- Geometrical** : 2½ Weeks
   Minimum 2 class works : Record works- 2 nos.
4. **Face Mask Making** : 2½ Weeks
   Minimum 2 class works : Record works- 1 nos.
5. **Pot Painting** : 2½ Weeks
   Minimum 2 class works : Record works- 1 nos.

(**Each exercise should have minimum 1 number of works with rough Thumbnail sketch followed by fair works)**

(The Students have to submit all exercise as Record Work for Practical exam, which will be evaluated by the External Examiner)

MANUALS FOR PRACTICALS

1. John Montague (2013). Basic Perspective Drawing- A Visual Approach, First Edition, John Wiley & Sons, New Jersey
2. William F Powell (2012). Art of Basic Drawing, First Edition, Walter Foster Creative Team, New York
3. Christopher Hart (2012), Basic Drawing made Amazingly Easy, First Edition, Crown Publishing Group, New York

Course Nature: Practical				
Assessment Method (Max. Marks: 100)				
In Semester	Assessment Tool	Studio/ Lab	Regularity and Discipline	Total
	Marks	40	10	50
End Semester	Assessment Tool	Record Work	Exam	Total
	Marks	20	30	50
Total				100

DEPARTMENT OF COMPUTER APPLICATIONS

Semester	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UCA18E81	OFFICE AUTOMATION	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To acquire knowledge about basic working skills in Open Office	a				
2.	To develop the skills in preparing documents, Work books and presentations			c	e	
3.	To develop the skill for performing the manipulations with documents, Work books and presentations		b			

LIST OF EXPERIMENTS

1. To open a new open office document and perform the following operations in it.
   - i. Text Alignment
   - ii. Change line spacing to 1.5
   - iii. Place a box to the entire text
   - iv. Add the bullets and numbering
   - v. Change type of font types and sizes
   - vi. Insert the symbols
2. To prepare an advertisement to a company with the following specifications
   - i. Attractive Page Border.
   - ii. Design the name of company using WordArt.
   - iii. Use ClipArt

Using of OpenOffice writer.

3. To design a Visiting Card for a company following specification
   - i. Size of the Visiting Card 4" X 3".
   - ii. Name of the company with a WortArt.
   - iii. Using of OpenOffice writer.
4. To perform Table Creation, Formatting and Conversion using OpenOffice.org.
5. To perform mail merge and letter preparation using OpenOffice.org.
6. To draw a flow chart for a given problem in the OpenOffice.org.
7. To perform the formula editor in OpenOffice.org Calc .
8. To perform the insertion of objects, graphics and protecting the document in OpenOffice.org Calc
9. i) To Draw a line, XY, bar and pie chart for a given user data in OpenOffice.org Calc

ii) To perform the sorting and import/export features in OpenOffice.org Calc.

10. Creating An Impress Presentation using wizard
11. Create a presentation on Tourism of a place using different template, color schema and text formats
12. Create a presentation about your college and department using animations and sound effects.Add OLE object to your presentation.

TEXT BOOKS

1. Keir Thomas and Andy Channelle with Jaime Sicam (2009), "Beginning Ubuntu Linux" , Apress.(Unit I & II)
2. Gurdy Leete, Ellen Finkelstein, and Mary Leete (2004), "Openoffice.org for dummies", Wiley Publishing, Inc.(Unit III,IV & V)

REFERENCE

1. Andy channelle (2009), "Beginning OpenOffice 3", Aprèss.

Course Nature : Practical						
Assessment Method (Max.Marks: 100)						
In Semester	Assessment Tools	Observation Note Book	Output Result in time	Model Examination	Regularity and Discipline	Total
	Marks	10	10	20	10	50
End Semester	Assessment Tools	Record Note Book	Program Writing	Debugging	Result / Output	Total
	Marks	10	10	15	15	50
Total						100

Semester	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UCA18E82	WEB DESIGN	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To acquire knowledge about basic working skills in web design	a				
2.	To design websites using the HTML tags.			c	e	

1. Develop a HTML document, which displays your name as <h1> heading and displays any four of your friends. Each of your friend's names must appear as hot text. When you click your friend's name, it must open another HTML document, which tells about your friend.
2. Write names of several countries in a paragraph and store it as an HTML document, world.html. Each country name must be a hot text. When you click India (for example), it must open india.html and it should provide a brief introduction about India.
3. Design a HTML document describing you. Assign a suitable background design and background color and a text color.
4. Develop a Complete Web Page using Frames and Framesets which gives the Information about a Hospital using HTML.
2. Develop complete set of web pages to describe you skills in various areas using HTML.
3. Develop a web site to publish your family and the details of each member-using HTML.
4. Develop a HTML document to display a Registration Form for an intercollegiate function.
9. Develop a HTML document to design Alumni Registration form of your college.
10. Create a HTML table with rows and columns and split them using Rowspan and Colspan.
11. Working with Frames.
12. Create a web page in the format of front page of a news paper using Text links. Align the text with colors.

TEXT BOOKS

1. Wendy G. Lehnert, “Internet 101 - A Beginners Guide to Internet and the World Wide Web”, Addison Wesley. UNITS I & II
2. Xavier.C,”World Wide Web design with HTML”, Tata McGraw Hill Publishing Limited, New Delhi. UNITS III, IV & V

REFERENCE

1. Bryan Pfaffenberger and Bill Karow, “HTML 4 Bible”, 2nd Edition, IDG Books Worldwide, Inc

Course Nature : Practical						
Assessment Method (Max.Marks: 100)						
In Semester	Assessment Tools	Observation Note Book	Output Result in time	Model Examination	Regularity and Discipline	Total
	Marks	10	10	20	10	50
End Semester	Assessment Tools	Record Note Book	Program Writing	Debugging	Result / Output	Total
	Marks	10	10	15	15	50
Total						100

Semester	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UCA18E83	PROGRAMMING IN C	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To acquire knowledge about basic Programming skills	a	c			
2.	To strengthen the knowledge on structures, arrays etc., of C programming	a	b	i		
3.	To develop program using the features in C Language for problem solving.	a	c	i		

LIST OF EXPERIMENTS

1. Program to check whether a number is positive or negative or zero using if statement.
2. Program to check vowel or consonant using switch case statement.
3. Program to check whether a number is prime or not using while statement.
4. Program to generate multiplication table using do…while statement.
5. Program to check the given string is palindrome or not using for statement.
6. Program to display Fibonacci series.
7. Program to search an element in an array using linear search method.
8. Program to find the smallest and largest number among 'n' numbers.
9. Program to sort elements in an array.
10. Program to add two matrices.
11. Program for manipulating the strings using string handling functions.
12. Program to find the sum of 'n' numbers by making function.
13. Program to calculate factorial of a number using recursion.
14. Program to generate the marksheet of the student using structure.

TEXT BOOK

1. Balagurusamy.E, (2008),"Programming in ANSI C", Second Edition, Tata McGraw Hill.

REFERENCES

1. Kamthane Ashok.N, (2013),"Programming in C", 2nd Edition, Pearson Education.
2. Yashvant P. Kanetkar, (2008), "Let us C", 8th Edition, Infinity science press.

Course Nature : Practical						
Assessment Method (Max.Marks: 100)						
In Semester	Assessment Tools	Observation Note Book	Output Result in time	Model Examination	Regularity and Discipline	Total
	Marks	10	10	20	10	50
End Semester	Assessment Tools	Record Note Book	Program Writing	Debugging	Result / Output	Total
	Marks	10	10	15	15	50
Total						100

Semester	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	UCA18E84	ANIMATION	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To acquire knowledge about basic working skills required for animation	a	b			
2.	To design different presentations and applying the effects.			c	e	

UNIT - I **(6 Hours)**

Introduction: Flash MX Environment – Tool bar – Tool box – Timeline – Panels – Property Inspector.

UNIT - II **(6 Hours)**

Graphics Tools in Flash: Drawing Tools – Object Selection Tools – Color Selection Tools – Viewing Tools.

UNIT - III **(6 Hours)**

Panels: Design Panel – Development panel.

Editing Techniques: Reshaping the object – Optimizing the curves – Softening the edges.

UNIT - IV **(6 Hours)**

Transformations: Arranging the elements – Aligning Objects.

Advanced Concepts : Frames – Layers – Scenes.

UNIT - V **(6 Hours)**

Animation: Framy-By-Frame Animation – Motion Tweening - Shpe Tweening – Text Animation – 3D Animation.

TEXT BOOK

1. K.Thyagharajan, B.Anbumani, “Flash 2004”, Tata McGraw-Hill Publishing Limited, New Delhi, 2004.

Course Nature : Practical						
Assessment Method (Max.Marks: 100)						
In Semester	Assessment Tools	Observation Note Book	Output Result in time	Model Examination	Regularity and Discipline	Total
	Marks	10	10	20	10	50
End Semester	Assessment Tools	Record Note Book	Program Writing	Debugging	Result / Output	Total
	Marks	10	10	15	15	50
Total						100

Semester	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	UCA18E85	STATISTICAL PACKAGE FOR SOCIAL SCIENCES (SPSS)	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To acquire knowledge about basic techniques used in SPSS for solving problems	a	c			
2.	To apply the features in SPSS for problem solving.	a	c	i		

LIST OF EXPERIMENTS

1. Construction of Frequency tables: Univariate Frequency tables -- Cross-Tabulation
2. Graphical representation of Data: Bar diagram – Simple Bar diagram, Multiple Bar Diagram, Sub divided Bar Diagram, Histogram Pie Diagram
3. Calculation of Measures of Central Tendencies: Mean, Median and Mode, Geometric mean
4. Calculation of Methods of Dispersion - Standard Deviation, Quartiles, Skewness, Kurtosis
5. Calculation of Correlation Coefficient: (a) Karl Pearson's Correlation Coefficient, (b) Spearman's Rank Correlation Coefficient
6. Calculation of Regression Trend: (a) Trend Line
7. Test of Significance for Single and two Samples – Large Sample Test (Z-Test) (a) Test for Mean, (b) Test for Proportion, (c) Test for Standard Deviation
8. Test of Significance for Single and two Samples – Small Sample Test (t-Test, F-test) (a) Test of Mean, (b) Test of Variances
9. Non-Parametric Test (a) One –Way Chi-square test (test for Homogeneity) (b) Two–Way Chi-square test (test for Attributes)
10. Test of Homogeneity of Means for more than 2 samples (a) One –Way ANOVA (b) Two–Way ANOVA

REFERENCES

1. Vijay Gupta, (1999),SPSS for Beginners, Published by VJBooks Inc.
2. Levine's Guide to SPSS for Analysis of Variance.2nd Edition, Melanie C. Page, Sanford L. Braver and David P. MacKinnon, LAWRENCE ERLBAUM ASSOCIATES, PUBLISHERS2003 Mahwah, New Jersey, London.

Course Nature : Practical						
Assessment Method (Max.Marks: 100)						
In Semester	Assessment Tools	Observation Note Book	Output Result in time	Model Examination	Regularity and Discipline	Total
	Marks	10	10	20	10	50
End Semester	Assessment Tools	Record Note Book	Program Writing	Debugging	Result / Output	Total
	Marks	10	10	15	15	50
Total						100

Semester	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	UCA18E86	PROGRAMMING IN C++	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To acquire knowledge about basic Programming skills using object oriented concepts	a	c			
2.	To strengthen the knowledge on constructors, Inheritance, Overloading of operators and functions.	a	b	i		
3.	To develop program using the features in C++ Language for problem solving.	a	c	i		

LIST OF EXPERIMENTS

1. Simple C++ programs
2. Program to Implement the concept of classes and object
3. Program using Constructor and Destructor
4. Program to implement the concept Array of Object
5. Program to implement Function Overloading.
6. Program to implement operator overloading
7. Program to implement the concept of Inheritance.

TEXT BOOK

1. Balagurusamy.E, (2008), "Object Oriented Programming with C++", Tata McGraw-Hill Publication.

Course Nature : Practical						
Assessment Method (Max.Marks: 100)						
In Semester	Assessment Tools	Observation Note Book	Output Result in time	Model Examination	Regularity and Discipline	Total
	Marks	10	10	20	10	50
End Semester	Assessment Tools	Record Note Book	Program Writing	Debugging	Result / Output	Total
	Marks	10	10	15	15	50
Total						100

DEPARTMENT OF COMPUTER SCIENCE

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UCS18E81	**OFFICE AUTOMATION**	0	1	1	2	2

	INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:	**Student Outcomes**				
1.	To practice day to day document creating using MS-Word	**a**				
2.	To develop the skills in using MS-Office software for administrative purposes.			**c**	**e**	
3.	To practice powerpoint for efficient presentations.		**b**			**i**

AUTOMATION (Microsoft Based)

MS-WORD

a) Text Manipulation Change the font size and type Aligning and justification of Text Underlining the Text Indenting the Text
   i) Prepare a Bio-data
   ii) Prepare a Letter

b) Usages of Numbering, Bullets, Footer and Headers. Usages of Spell check and find and replace
   i) Prepare a document in newspaper format
   ii) Prepare a document with bullets, footers and Headers c)Tables and manipulation

c) Creation, Insertion, Deletion (Columns & Rows) and usage of Auto format.

d) Create a calender and Auto format it

e) Create a marksheet using table and find out the total marks.
   i) Picture insertion and alignment

f) Prepare a greeting card

g) Creation of documents using templates
   i) Creation of templates.
   ii) Prepare a letter using and template
   iii) Prepare a biodata using various kinds of templates

h) Mail Merge Concepts
   i) Prepare an invitation to be sent to specific addresses, in the data source.

MS-EXCEL CELL EDITING

i) Usage of formulate and Built – in – Functions
ii) Describe the types of functions
iii) File Manipulations

iv) Data sorting – Ascending and Descending (both numbers and alphabets)
v) Worksheet preparation
vi) Marklist preparation for a student
vii) Individual Pay Bill preparation
viii) Electricity Bill preparation
ix) Inventory Report preparation
x) Invoice Report preparation
xi) Drawing Graphs.

MS-POWERPOINT

a) Inserting Clip and Pictures Frame movements of the above
b) Create a slide show presentation for a seminar (choose your own topic)
   I. Enter the text in outline view
   II. Create Non-Bulleted and Bulleted body Text
   III. Apply the appropriate Text attributes.
   IV. Insertion of New Slides
c) Preparation of Organization Charts
d) Create a slide preparation for an invitation.
   I. Insert an object from a Bitmap file
   II. Enter the text in the slide view.
   III. Apply appropriate text attribute
   IV. Rotate the object to 45 degree (approximately)
   V. Apply shadow to the object
e) Preparation using wizards
   i. Usage of design templates
f) Create a slide show presentation to display percentage of marks in each semester for all students
   i. Use bar chart(X-axis: Semester, Y-axis: marks)
   ii. Use different presentation template and different transition effect for each slide.
   iii. Use different text attribute in each slide.

Course Nature : Practical						
Assessment Method (Max.Marks: 100)						
In Semester	Assessment Tools	Observation Note Book	Output Result in time	Model Examination	Regularity and Discipline	Total
	Marks	10	10	20	10	50
End Semester	Assessment Tools	Record Note Book	Program Writing	Debugging	Result / Output	Total
	Marks	10	10	15	15	50
Total						**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UCS18E82	INTERNET CONCEPTS	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To acquire knowledge about Internet	**a**				
2.	To learn to create dynamic web pages.			**c**	**e**	

PROGRAM LIST

1. Creating an E-mail ID
2. Creating A Text File and Send to E-Mail
3. Downloading Files, Text, Pictures from E-Mail.
4. Checking E-Mail.
5. Searching Search Engine
6. Inserting a Text File into Web.
7. Sending a Group Of Members to Different User
8. Chatting
9. Create a Simple Webpage Using HTML.
10. Use Frames to Include Image and Videos.
11. Add a Cascading Style Sheet for Designing The Web Page.
12. Design of a Website.

Course Nature : Practical						
Assessment Method (Max.Marks: 100)						
In Semester	Assessment Tools	Observation Note Book	Output Result in time	Model Examination	Regularity and Discipline	Total
	Marks	10	10	20	10	50
End Semester	Assessment Tools	Record Note Book	Program Writing	Debugging	Result / Output	Total
	Marks	10	10	15	15	50
Total						100

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	UCS18E83	PHOTOSHOP	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To practice basic commands in Photoshop	a				
2.	To develop the skills in using Photoshop for multimedia effects in pictures.			c	e	

PROGRAM LIST

1. Working with the clone stamp tool
2. Drawing Watch using custom shape
3. Testing lab mode
4. Using multichannel mode
5. Using the sponge Tool
6. Antique framing
7. Isolating a Complex Image
8. Removing an element from an image Adjusting the focus

Course Nature : Practical						
Assessment Method (Max.Marks: 100)						
In Semester	Assessment Tools	Observation Note Book	Output Result in time	Model Examination	Regularity and Discipline	Total
	Marks	10	10	20	10	50
End Semester	Assessment Tools	Record Note Book	Program Writing	Debugging	Result / Output	Total
	Marks	10	10	15	15	50
Total						100

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	UCS18E84	PC MAINTENANCE AND TROUBLE SHOOTING	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To acquire knowledge about PC Hardware.	**a**				
2.	To learn to PC troubleshooting			**c**	**e**	

1. Computer Components & Accessories
2. Computer Power Repair
3. Frozen Computer Screen
4. Repairing a Slow Computer
5. Repairing Errors
6. Basic Computer Software Troubleshooting
7. Basic Network Troubleshooting
8. Protecting & Repairing VirusesIntro, DHTML coding, examples, Pong Program, Database Design –NormalizationReadings, Pong

Course Nature : Practical						
Assessment Method (Max.Marks: 100)						
In Semester	Assessment Tools	Observation Note Book	Output Result in time	Model Examination	Regularity and Discipline	Total
	Marks	10	10	20	10	50
End Semester	Assessment Tools	Record Note Book	Program Writing	Debugging	Result / Output	Total
	Marks	10	10	15	15	50
Total						100

DEPARTMENT OF BIOTECHNOLOGY

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UBT18E81	Mushroom Cultivation	0	1	1	2	2

	INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:	Student Outcomes				
1.	To learn about the mushroom and it morphology.	a	g			
2.	To cultivate the mushroom in the lab and small unit scale.	k	m	n		

1. Different parts of a typical mushroom & variations in mushroom morphology.
2. Equipments & facilities.
3. Button, Straw& Oyster- General morphology, distinguishing characteristics.
4. Fundamentals of cultivation system- small village unit & larger commercial unit.
5. Spawn & Spawning.
6. Storage of spawn.
7. Cultivation of mushroom.
8. Visit to relevant Labs/Field Visits.

TEXT BOOK:

1. Mushroom Cultivation, Tripathi, D.P. (2005) Oxford & IBH Publishing Co. PVT.LTD, New Delhi.

REFERENCES:

1. Mushroom Production and Processing Technology, Pathak Yadav Gour (2010) Published by Agrobios (India).
2. A hand book of edible mushroom, S. Kannaiyan& K. Ramasamy (1980). Today & Tomorrows printers & publishers, New Delhi
3. Handbook on Mushrooms, Nita Bahl, oxford & IBH Publishing Co.

Course Nature : Practical						
Assessment Method (Max.Marks: 100)						
In Semester	Assessment Tool	Observation Note Book	Performance in practical	Result of the experiment	Attendance	Total
	Marks	15	15	15	5	**50**
End Semester Weightage						**50**
Total						**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UBT18E82	Herbal Medicine	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To provide students with a basic understanding and knowledge of dietary supplements.	h	i			
2.	To develop awareness among students about herbal remedies and their utility.	g	h	j	l	

UNIT - I

Terminologies – Definitions – Classification of medicinal plants based on their effects – Ecological status with special reference to India.

UNIT - II

Allergens – types – sources – active principles – Chemical nature – Cell modifiers – Lectins –mutagens, teratogens – Allergic reactions with known examples.

UNIT - III

Drugs acting on brain and nervous system – Rheumatic arthritis – Psychoactive drugs – Depressants, Stimulants, hallucinogens – sources, effects, basic mechanism of action.

UNIT - IV

Cardiovascular diseases – blood pressure – cardiac drugs of plant origins – alkaloids, anticoagulants – basic mechanism of action. Pulmonary / respiratory disorders – asthma –bronchitis – common cold – allergy – Remedy from plants.

UNIT - V

Drugs for urinogenital disorders – roots of Withania somnifera – Memory stimulants – Centella asiatica – Drugs for dissolving kidney stones – Musa paradisica (pseudostem) – Antiinflammatory drugs – Cardiospermum – Anticancer drugs – Catharanthus roseus.

TEXT BOOK

1. Gokhale, S.S., C.K.Kokate and A.P. Purohit (1994) Pharmacognosy. Nirali Prakashan. Pune.

REFERENCES

1. Tyagi, Dinesh Kumar (2005) Pharma Forestry. *"Field Guide to Medicinal Plants".* Atlantic Publishers and Distributors, New Delhi.
2. Faroogi, A.A., and B.S. Sreeramu (2004). "*Cultivation of Medicinal and Aromatic Crops*". University Press (India) Pvt. Ltd., Hyderabad.
3. Singh & Jain (1985) "*Taxonomy of Angiosperms".* Rastogi Publications, Meerut.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	UBT18E83	Fermentation Technology	0	1	1	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To learn about the fermentation technology and its applications.	a	c	m		
2.	To learn about microbes and the methods involved in fermentation process	i	n			

1. Laboratory guidelines and practices.
2. Instrumentation of fermentor.
3. Types and parts of fermentor.
4. Culturing of microbes.
5. Fermentation process.
6. Sauerkraut preparation.
7. Wine production.
8. Bread making.

REFERENCES:

1. Stanbury, P.E. and Whitaker A., Principles of Fermentation Technology (1984) Pergamon Press.
2. Pirt, S.J. Principles of Microbial and Cell Cultivation. Blackwell Scientific Publication, London.

Course Nature : Practical						
Assessment Method (Max.Marks: 100)						
In Semester	Assessment Tool	Observation Note Book	Performance in practical	Result of the experiment	Attendance	Total
	Marks	15	15	15	5	**50**
End Semester Weightage						**50**
Total						**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	UBT18E84	Nutrition Through Life Cycle	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To understand the Nutritional needs from birth to adult and old age.	m	f			
2.	To develop an attitude for planned nutritional diet.	h	m			

UNIT - I

General concepts about growth and development through different stages of life. Components of energy expenditure.

UNIT - II

Nutrition in Infancy, Preschool and School going age: a. Preschool - Growth and development of preschool children, Food habits and nutrient intake of preschool children. b. School going age -Physical development, Nutritional status of school children, school lunch program.

UNIT - III

Nutrition during Adolescence and Adults: a. Adolescence: Changes of growth characteristics of adolescents. Nutritional needs of the adolescents.

UNIT - IV

ICMR Nutrient allowances, Dietary guidelines. Common nutrition related problem of pregnancy and Lactation.

UNIT - V

Infancy Rate of growth, weight as the indicator, Nutrition allowances for the infants. Breast feeding, Premature infant and their feeding infant formulas.

REFERENCES

1. Clark, N., “Sports Nutrition Guide Book”, Versa Press, U.S.A., 1997.
2. Williams, M.H “Nutrition Aspects of Human, physical and Athletic performance”, II Edition, Spring field publication, Illinois, 1995.
3. Lankford, R.T. Marie and Steward, J., “Nutrition and physical fitness, Foundation of Normal and Therapeutic Nutrition”, Wiley Medical publication, New York, 1985.
4. William, Sue Rodwell - “Nutrition and Diet Therapy” (1985) 5thedition Moshey Co., St Louis.
5. M. Swaminathan “Principles of Nutrition and Dietetics” 1993, Bappeo 88, Mysore Road, Bangalore-5600018.

6. Maurice E, Shils, James A. Olson, Moshe Shike “Modern Nutrition in health and disease” eighth edition, Vol. I, II Lea & Febiger Philadelphia, A Waverly Company, 1994.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

DEPARTMENT OF COMMERCE and
DEPARTMENT OF COMMERCE (A&F, CS)

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UCM18E81	Advertising And Salesmanship	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1	To understand basic concepts of Marketing	f	n			
2	To introduce the students about the importance of the promotional aspects of Marketing and the strategies of Advertising and Copy-writing.	e	f	h		

UNIT – I

Advertising - Meaning – Evolution of Advertising – Development of Advertising in India – Functions of Advertising – Classification of Advertising

UNIT – II

Economic Aspects of Advertising – The Responsibility of the Advertiser – Meaning – Importance of Advertising Agency – functional Departments of an Advertising Agency – Functions of Advertising Agencies –Definition of Advertising Campaign – The Copy – Purpose of the copy – Designing Individual Advertisements – Purpose of Layout – Functions of the Layout – Direct and Indirect Advertising – Need for Measuring Advertising Effectiveness

UNIT – III

Personal Selling and Salesmanship – Definition - Features – Classification of Salesmen – Qualities of a Successful Salesman – Steps in the Personal Selling Process – AIDAS Theory of Selling – Importance of Sales Organisation – Meaning of Recruitment and Selection – Processes of Recruitment – Sources of Recruitment – Motivation of Salesmen – Meaning of Motivation – Method of Motivation – Tools of Motivation

UNIT – IV

Sales Promotion & Publicity – Concept – Benefits – Objectives – Communication – Medium of Reach – Tools Employed for of Sales Promotion – Planning Sales Promotion Programmes- Definition – Classification of Buying Motives – Sizing Up of Customers – After Sales Service

UNIT – V

Publicity - Meaning and Definition – Purposes of Advertising Research – Advertising Strategy Research – Sources of Information

Text Book

P. Saravanavel & S.Sumathi, 2014, Advertising and Salesmanship, Margham Publication. Chennai.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	Assessment Tool	Cycle Test I	Cycle Test II	Model Examination	Assignment	Attendance	Total
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UCC18E81	GENERAL COMMERCIAL KNOWLEDGE	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1	To make the other fraternity students to learn business emergence and development	e	f	j		
2	To ensure the students to have knowledge over the office set up and practices	h	n			
3	To the students to know the various filling methods	i	n			

UNIT-I

Forms of Business Organizations - Sole Trade - Partnership Features - Merits and Demerits.

UNIT-II

Joint Stock Company - Features - Memorandum and Articles - Contents

UNIT-III

Prospectus and Contents - Shares and Debentures - Types - Co-operatives - Features - Types - Advantages.

UNIT-IV

Office Organization - What is an Office? Functions of Office - Office Accommodation and Environment - Office Layout - Office Manual.

UNIT-V

Handling of Mail, Filing and Indexing - Inward / Outward Mail - Filing and Indexing - System, Essentials and Classification - Methods - Horizontal vs Vertical Filing - Centralized and Decentralized – Indexing.

TEXT BOOK

1. Nagarajan. K.L. “Principles of Commerce and General Commercial Knowledge” S. Chand & Co, New Delhi, Edtiond 2012.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	Assessment Tool	Cycle Test I	Cycle Test II	Model Examination	Assignment	Attendance	Total
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	Total of LTP	C
IV	UCM18E82	CREATIVITY AND INNOVATION MANAGEMENT	2	0	0	2	2

	INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:	Student Outcomes				
1	To teach fundamentals of creativity and innovation management.	d	g			
2	To provide awareness on the attributes of thinking, sources of innovation, creative problem solving, and techniques of unblocking creativity.	k	m	n		

UNIT – I

Introduction – Definitions – Main Components – Individual and Group Creativity – Creativity at an Individual Level – Brain Processes - Barriers for Individual Creativity – Barriers to Organizational Creativity – Developing Creativity – Creating a Climate for Creativity – Convergent Thinking – Divergent thinking –Idea Generation Techniques: Sparking Creativity – Thinking Hats Methods.

UNIT – II

Attributes of Good Thinkers – Components of Critical Thinking - Creative Process – The Creative Person – qualities of a creative person – Differences between Critical and Creative Thinking – Thinking of Left and Right Brain – Right Brain Vs. Left Brain – Mental Fitness Exercises for the brain - Lateral Thinking – Vertical Thinking – Difference between Lateral and Vertical thinking – Attitudes Towards Lateral Thinking – Basic nature – Need – Uses – Techniques

UNIT – III

Innovation – Sources of Innovation- Making Sense of Innovation – Categories of Innovation – Managing Innovation Development within Organizations – Managerial Roles and Behaviors in support of Innovation- Invention – Difference between innovation and invention- Suspend judgement- Analogies- Lateral Thinking – Creativity Exercises.

UNIT – IV

Problem – problem solving – Creative Problem Solving – Steps in the Creative Problem Solving Process – Rules for Creative Problem Solving – Models of Techniques of Creative Problem Solving – Brainstorming- Mind Mapping - Mental Gym quiz

UNIT – V

Blocks to Creativity – Techniques help to overcome blocks of creativity – Strategies for Unblocking – Fears and Disabilities – Energy for your Creativity – Making the Environment More Creative

Text Book:

1. Rizwan Ahmed, P Creativity and Innovation Management, Margam Publications (2015)

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	Assessment Tool	Cycle Test I	Cycle Test II	Model Examination	Assignment	Attendance	Total
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	UCC18E82	INDIAN BANKING	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1	To make students to learn about the banking practices and uses	e	f			
2	To have common knowledge over the modern banking operations	i	n			
3	To ensure and equip the knowledge over the modern functions and usage of services	n	j			

UNIT-I

Introduction –Meaning and Definitions-Classification of banks-banking system in india

UNIT-II

Commercial banks-Functions –Role of banks in the economic development.

UNIT-III

Reserve bank of India-Functions-Emergence and Legal framework of Reserve Bank of India-Regulatory powers

UNIT-IV

Modern Banking –Functions-E-Banking-Internet banking – Mobile banking-Automatic Teller Machine-Electronic Fund transfer- and NEFT-RTGS

UNIT-V

Banker-Customer-Relationship-Opening of bank account – Types of accounts –KYC concepts.

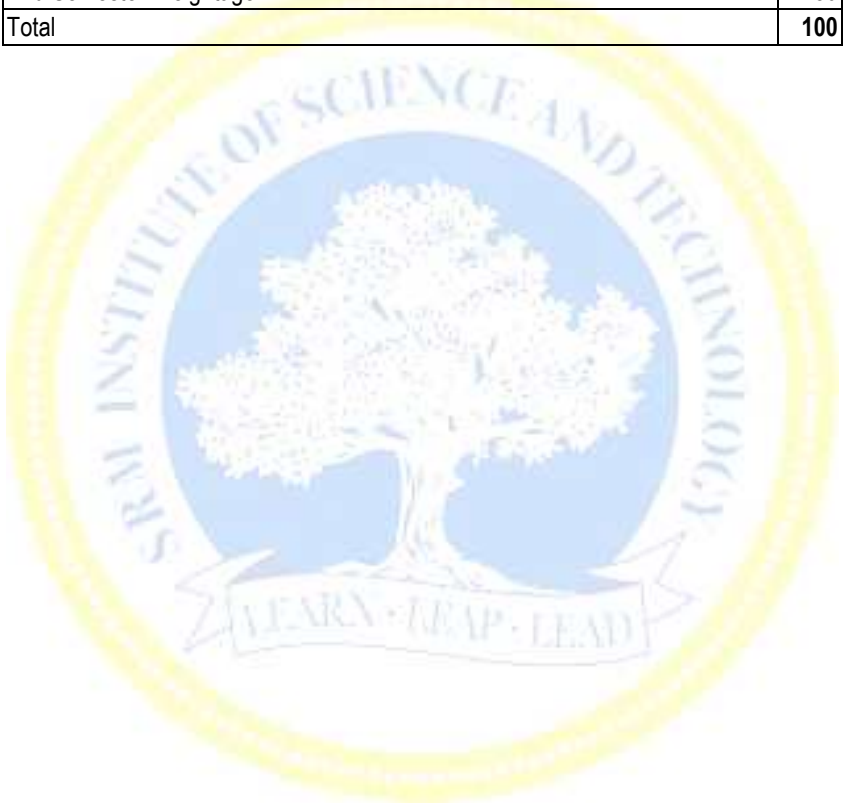
Text Books

1. B.Santhanam Banking theory Law and Practive – (Margham Publishers)
2. S.Gurusamy Banking Theory Law & practice-Vijay Nicole Imprints Ltd Chennai.

REFERENCES

1. Gordon E and K Natarajan (Edn 2013) , “Banking Theory Law and Practice”, Himalayan Publishing, Mumbai,
2. Guruswamy(Edn 2013) S “Banking Theory Law and Practice”, Vijay Nicole Imprints Ltd, Chennai,

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	10	10	20	5	5	**50**
End Semester Weightage							**50**
Total							**100**



DEPARTMENT OF JOURNALISM AND MASS COMMUNICATION

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	Total of LTP	C
III	UJM18E81	Introduction To International Relations	1	1	0	2	2

OBJECTIVES: At the end of this SUBJECT, the students will be able to,
SUBJECT REQUIREMENT: At the end of every unit, the students will be expected to submit an assignment or make a presentation as a part of internal assessment.

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	Gain knowledge about the structures and the functions of the foreign office and the importance of international relations.	h	i	k	f	e
2.	Know the importance of diplomatic writing, the necessities involved in it and the space given for diplomatic writing in the media.	h	i	k	f	

UNIT - I
Actors and interests in International Relations – The origins, development and decline of the modern state – Critical approaches to IR Theory – Causes of war – Coercion and the use of force Civil wars and terrorism

UNIT - II
International organizations and Global governance – Humanitarian intervention and laws of war – Humanitarian Aid – International security – Trade and development – globalization and the environment – National security

UNIT - III
What are the basic requirements of a diplomatic reporter if he/she is looking to cover the foreign news? Does knowledge of foreign affairs / degree in international relations a pre-requisite for covering foreign policy? How does a newspaper editor choose a diplomatic reporter?

UNIT - IV
The role and importance of diplomatic reporting in journalism and in the media industry. Where does diplomacy figure in a newspaper? Should newspapers devote space to what is happening beyond the borders, when so much is happening within the border?

UNIT - V

The structure and responsibilities of the diplomatic / foreign desk in a newspaper and the role of a news editor in coordinating foreign news and diplomatic writing from various diplomatic reporters and news agencies.

REFERENCES

1. Chomsky Noamsky, (2016), *Who Rules the World?* New York, United States:Metropolitan Books
2. Kaplan, Robert, (2014), Asia's Cauldron: The South China Sea and the End of a Stable Pacific. New York, United States: Random House
3. Mearshimer John, (2001), *The Tragedy of Great Power Politics.* New York, United States: W. W. Norton & Co.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	Total of LTP	C
III	UJM18E82	WRITING FOR MEDIA	1	1	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	Learn various writing techniques.	f	h			
2.	Understand how to write for different media.	f	h	i		
3.	Develop other valuable skills for effective media content presentation	h	i			

SUBJECT REQUIREMENT: At the end of every unit, the students will be expected to submit an assignment or make a presentation as a part of internal assessment.

UNIT - I Writing for News & Feature stories

Understanding what makes News – copy editing symbols – characteristics of news – writing for interview–Types of leads – Writing obituaries – Editorials – Writing feature stories – News writing

UNIT - II Writing for Radio

Characteristic of radio – Planning and Scripting for educational radio programme – writing for radio – Context of radio station – Cue materials – News reading and presentation – Writingscript for radio programme.

UNIT - III Writing for web

Understanding and using the internet – A brief history – Ethical considerations – Online journalism – How it differs from print and electronic journalism – Content developing using links, texts.

UNIT - IV Writing for TV news

TV news gathering – News story format – Basic news scripts in TV – Types of stories – Ethical considerations – Script and visual sync for a news story.

UNIT - V

Digital Divide - Writing for the screen vs. writing for print, Styles of web writing: Features and Articles on the Web, Interviewing on the Web, Do's and Don'ts, Comparative Analysis of E editions v/s print editions of national dailies.

REFERENCES

1. Choudhary R., (2012), *Media Writing Hardcover.* Delhi, India: Centrum Press
2. Raman Usha, (2009), *Writing For Media.* Chennai, Tamil Nadu: Oxford Publications
3. Thomas Sunny, (2008), *Writing for the Media, Career Information & Guidance*

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	Total of LTP	C
IV	UJM18E83	ADVERTISING	1	1	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	Define and explain advertising objectives, its role and functions.					
2.	To impart skill of ad making.	f	h			
3.	To give an understanding of ad agency and its functioning.	f	h	i		
4.	To make students aware of ad industry and its issues	h	i			

UNIT - I

Advertising – Definitions –Meaning, Nature, Scope- Types of Advertisements- Role of Advertising in Society- Advertisements and Ethics.

UNIT - II

Advertising Agency: Role and function, media selection, idea generation. The Advertising department: Organisation –Above the line & below the line –Working and supervising an agency – Below - the line – in – house responsibilities.

UNIT - III

Layout and typography – Planning the ad – AIDCA – Stages in Design – the eight laws of design – Headlines – Typography –Radio commercials & TV commercials .

UNIT - IV

Copy writing; Types of Copy; How to prepare; Principles of writing; Main features; Copy writer: qualities, duties and responsibilities; Copy for electronic media and print media; Ad-administration and Video production.

UNIT - V

Ethics in advertising, media laws concerning advertising, apex bodies in advertising-Indian Society of Advertisers (ISA), Advertising Agencies Association of India (AAA1), Advertising clubs, Advertising business-the national and global advertising scene, Portrayal of women in advertising-social effects of advertising.

TEXT BOOKS

1. *"Advertising and Promotion"* – Geroge E- Belch & Michael. A. Belch-Tate McGraw- Hill – Sixth Edition.
2. *"Promotion Management*" –John –J. Bunnelt- West Publishing Company.

REFERENCES

1. *"Foundations of Advertising Theory and Practise"*- Chunawallah, S.A. and K.C. Sethia (2000): Himalaya Publishing House, Mumbai.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	Total of LTP	C
IV	UJM18E84	FILM STUDIES	1	1	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To introduce basics of Film Studies.	f	h	i		
2.	To impart basic understanding of development of World Cinema	h	i			

SUBJECT REQUIREMENT: At the end of every unit, the students will be expected to submit an assignment or make a presentation as a part of internal assessment.

UNIT - I

Advent of cinema. Indian (Hindi, Tamil & other languages), Film form and film History: Early Cinema (1893-1903). Development of Classical Hollywood cinema (1903-1927). Studio System. Classical Hollywood Cinema after the coming of sound.

UNIT - II

German expressionism (1919-1924). French Impressionism and Surrealism (1917-1930). Soviet Montage (1924-1930). Italian neo-realism (1942-1951). The French New wave (1959-1964). Japanese cinema. Cinema in the third world. Contemporary trends.

UNIT - III

Mise-en-scene-Realism, the power ofmise-en-scene, aspects of mise-en-scene. space and time, narrative functions of mise-en-scene. Cinematographer properties-the photographic image, framing, duration of the image, montage and long take. Editing- dimensions of film editing, continuity editing, alternative to continuity editing. Sound-the powers of sound, fundamentals of film sound, dimensions of film sound, functions of film sound.

UNIT - IV

The concept of form in films, principles of film, narrative form, non-narrative form, dividing a film into parts and Genres (language, style, grammar, syntax.) Style as a formal system, narrative unity, ambiguity, a non-classical approach to narrative films, space and time, disunity, form, style and ideology.

UNIT - V

Planning, pre-production- Concept / Story development, Scripting / Screen play writing, Budgeting, Casting, Locations, Financing. Production-Shooting, Direction &

Cinematography. Post production- Editing, Sound recording, Dubbing, Special effects, Graphics & Final mixing. Distribution & Exhibition.

TEXT BOOKS

1. Jill Nelmes, "*Introduction to Film Studies",* Routledge; 5 edition, 2011
2. Kuhn, A and Westwall, G *"Dictionary of Film Studies",* Oxford Univ. Press, 2012

REFERENCES

1. David Bordwell, *"Film Art: An Introduction",* McGraw-Hill, 2012
2. Thoraval, Yves, *"The Cinema of India",* Praeger 2000

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

DEPARTMENT OF BUSINESS ADMINISTRATION

SEMESTER – III

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UBA18E81	Small Business Operation	2	0	0	2	2

COURSE RATIONALE

This SUBJECT is designed to impart the fundamental knowledge for establishing the small Business operation

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected to		Student Outcomes				
1.	Acquire knowledge on Basic steps for starting up of the industry	a				
2.	To understand the Types of organization	a		f	g	h
3.	To familiarize Different sources of funds available	a	b			
4.	Incentives and subsidies for SSI units					j

UNIT I

Meaning of small Scale Enterprises-objective of Micro ,small , Medium Enterprises Act of MSME(2006)-importance of MSMEs –Advantages-problems Measures of the government to develop small industries

UNIT II

Steps for Starting A Small Industry –search for business idea, sources of ideas-business plan- project formulation and design

UNIT III

Selection of type of Organization –Sole proprietorship- Partnership firms, Joint stock Company- factors influencing the Choice of Organization

UNIT IV

Sources of Project Finance –Short Term ,Medium term and long Term Finance –Role of banks –institutions Assisting Small Enterprises –District industries Centers , industrial estates

UNIT V

Incentives and Subsidies –Meaning –Need and problems- Schemes of incentives for SSI Units-Taxation benefits to SSIs.

TEXT BOOKS.

1. C B Gupta & N P srinivasan –Entrepreneurship Development in India
2. Dr.jayashree suresh –Entrepreneurship Development.-Margham Publication-2012

REFERENCES:

1. Y.K. Bhusan- Business organization –Sultan Chand, New Delhi
2. C.B. Gupta & N.P. Srinivasan- Entrepreneurship Development In India, Sultan Chand
3. P. Saravanavel -Entrepreneurship Development -ESS PEE KAY Pub, Chennai.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UBA18E82	Rural Marketing	2	0	0	2	2

SUBJECT RATIONALE:
To familiarize students with the untapped potential market in Rural India & the growing market driven strategies to explore it.

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected to		Student Outcomes				
1.	To acquaint the students to the rising economy, the changing consumption habits & preferences of rural consumers	a				
2.	To understand the market segmentation and innovation in rural area			f	g	h
3.	To equip the students to overcome the challenges of communicating to media-dark rural audience of lower literacy rates & poor infrastructure.			h	i	j
4	To explore the Rural CRM	a	b			j

UNIT - I RURAL MARKET – AN OVERVIEW
Introduction – Rural Markets in India – Products – Distribution – Communication – Evolution of Rural Market - Rural Market Environment – Physical Environment – Socio-Cultural Environment – Political & Technological Environments.

UNIT - II RURAL CONSUMER BEHAVIOUR& SEGMENTATION
Rural Consumerism - Factors affecting rural consumer behavior - Characteristics of Rural Consumers – Buying Process – Brand Loyalty - Segmentation – Targeting & Positioning.

UNIT - III RURAL PRODUCT & PRICING STRATEGIES
Rural Market – Marketing Mix – 4P's & 4A's – Rural Product Categories – Customized Rural Products- Brand building in Rural India - Pricing – Internal & External influences- Pricing Strategies and Approaches.

UNIT - IV DISTRIBUTION & PROMOTION STRATEGIES
Rural Distribution- Rural Market assessments- Channels of Distribution – Rural Distribution Models – Promotion tools & Techniques.

UNIT - V INNOVATIONS IN RURAL MARKETS

Changing scenario of Rural Markets- Role of Innovation – ICT initiatives – Emergence of organized retailing – Future Trends of Rural Marketing – Rural CRM

TEXT BOOK

1. Kashyap Pradeep, The Rural Marketing Book, Pearson Education Publications, 2012.

REFERENCES

1. Pradeep Kashyap & Siddhartha Raut, The Rural Marketing Book, Biztantra Publications, New Delhi, 2005.
2. Shipra Chawla, A textbook on Rural Marketing, Dominant Publishers And Distributors, 2007.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UBA18E83	Consumer Affairs	2	0	0	2	2

SUBJECT RATIONALE:

To focus on the understanding of consumer behavior, how and why consumers make purchase decisions, how they think, feel and act before, during and after the purchase.

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected to		Student Outcomes				
1.	Familiarize the students with their rights and responsibilities as a consumer	a				
2.	Understand social framework of consumer rights and legal framework of protecting consumer rights		c	f		
3.	Know the procedure of redress of consumer complaints, and the role of different agencies in establishing product and service standards	a				i
4	Able to comprehend the business firms' interface with consumers and the consumer related regulatory and business environment.			f	g	i

UNIT I – Conceptual Framework

Concept of Consumer, Liberalization and Globalization of markets with special reference to Indian Consumer Markets , E-Commerce with reference to Indian Market, Concept of Price in Retail and Wholesale, Maximum Retail Price , Fair Price, GST, labeling and packaging along with relevant laws, Legal Metrology. **Experiencing and Voicing Dissatisfaction:** Consumer buying process, Consumer Satisfaction/dissatisfaction-Grievances-complaint, Consumer Complaining Behaviour: Alternatives available to Dissatisfied Consumers; Complaint handling Process: ISO 10000 suite

UNIT - II Objective and Basics Concepts

Consumer rights and UN Guidelines on consumer protection, Consumer goods, defect in goods, spurious goods and services, service, deficiency in service, unfair trade practice. Organizational set-up under the Consumer Protection Act: consumer Protection Councils at the Central, State and District Levels; Adjudicatory Bodies: District Forums, State Commissions, National Commission

UNIT - III Grievance Redressal Mechanism under the Indian Consumer Protection Law

Who can file a complaint? Procedure for filing and hearing of a complaint; Relief/Remedy available; Appeal, frivolous and vexatious complaints; Offences and penalties.

Leading Cases decided under Consumer Protection law by Supreme Court/National Commission: Medical Negligence; Banking&Insurance; Housing & Real Estate; Electricity and Telecom Services; Education; Defective Products & Unfair Trade Practices

UNIT - IV Role of Industry Regulators in Consumer Protection (6hrs)

i. Banking : RBI and Banking Ombudsman
ii. Insurance: IRDA and Insurance Ombudsman
iii. Telecommunication: TRAI
iv. Food Products: FSSAI
v. Electricity Supply: Electricity Regulatory Commission
vi. Real Estate Regulatory Authority

UNIT - V Contemporary Issues in Consumer Affairs (6hrs)

Evolution of Consumer Movement in India, Formation of consumer organizations and their role in consumer protection, Misleading Advertisements and sustainable consumption, National Consumer Helpline.

Quality and Standardization: Voluntary and Mandatory standards; Role of BIS, Indian Standards Mark (ISI), Ag-mark, Hallmarking, Licensing and Surveillance; Role of International Standards; ISO an Overview

TEXT BOOKS:

1. Khanna, Sri Ram, Savita hansp;al, Sheetal Kapoor, and H.K.Awasthi.(2007) Consumer Affairs, Universities Press

REFERENCES

1. Choudhary, Ram Naresh Prasad (2005), Consumer Protection Law Provisions and Procedure, Deep and Deep Publications Pvt Ltd.
2. G.Ganesan and M.Sumathy, (2012), Globalisation and Consumerism: Issues and Challenges, Regal Publicaitons
3. Suresh Mistra and Sapna Chadah(2012), Consumer Protection in India: Issues and Concerns, IIPA, New Delhi
4. www.consumeraffairs.nic.in
5. The Consumer Protection Act, 1986 and its later

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER – IV

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UBA18E84	Business organization	2	0	0	2	2

To specialize students in the general knowledge and skills involved in starting and managing business organizations.

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected to		Student Outcomes				
1.	To educate students on the various forms of business organizations and their nature and functions	a	b		g	
2.	To give an exposure about the resources required for developing business organizations.			f		
3.	To create awareness on stock exchange			d		
4	To enable students to understand the workings of chambers of commerce		b			i

UNIT - I

Business - Meaning - Types of Business and Profession - Organization - Meaning and importance of Business Organization.

UNIT - II

Forms of Business Organization - Sole Trader, Partnership - Joint Hindu Family System - Joint Stock Companies - Co-operative Societies - Public Utilities and Public Enterprises.

UNIT - III

Location of Industry - Factors influencing location and size - Industrial Estates and District Industries Centre.

UNIT - IV

Stock Exchange - Functions - Working - Services - Regulations of Stock Exchange in India, Business combinations - Causes - Types - Effects.

UNIT - V

Trade Associations and Chamber of Commerce.

TEXT BOOK:

1. Reddy P. N. and Gulshan S. S. - Principles of Business Organization and Management

REFERENCES

1. Bhusan Y. K - Business Organization.
2. PrakeshJagadeesh - Business Organization and Management.B.B.A.: Syllabus (CBCS)9
3. Vasudevan and Radhaswami - Business Organization.
4. Chopra R. K - Office Management.
5. G. Prasad, C.D. Balaji - Business Organization.
6. M.C. Shukla - Business Organization & Management.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UBA18E85	E-Marketing	2	0	0	2	2

SUBJECT RATIONALE:
This SUBJECT examines the fundamental principles associated with the strategic adoption, implementation, use and evaluation of internet in organisations. It discusses the theories and principles which govern the strategic adoption of the internet to create and sustain value- competitiveness

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected to		Student Outcomes				
1.	Analyze the strategic issues, processes, policies and techniques associated with doing business online;	a	b			
2.	Assess and explain global and socio-cultural issues surrounding the adoption of internet;			c		j
3.	Write a technical report on findings from a case study on the use of the internet in business and society			e		h

UNIT - I
Marketing on the net: Meaning and Conceptual foundation of net marketing; Market opportunity

UNIT - II
Managing in the E - Commerce world; Business models: B2B, B2C, and C2C

Unit - III
Understanding internet consumer; B2C internet marketing; Shopping agents and Consumer behavior

UNIT - IV
Internet marketing communication; B2B internet marketing

UNIT - V
Customer relationship development; Developing and managing effective websites; Customer service and support in web space

TEXT BOOK
1. Chaston, E-marketing Strategy, Tata McGraw Hill

REFERENCES

1. Paul S Richardson, Internet Marketing, Tata McGraw Hill
2. Marry Lou Roberts, Internet Marketing, Tata McGraw Hil
3. Thomas Eisenmann, Internet Business Models, Tata McGraw Hill

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UBA18E86	Marketing Research	2	0	0	2	2

SUBJECT RATIONALE:

1. To introduce the students to marketing research as an important tool of marketing management.
2. To familiarize the students so as to understand and apply the techniques for researching markets and to offer basic research orientation.

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected to		Student Outcomes				
1.	To introduce the students to marketing research as an important tool of marketing management.	a	b			
2.	To familiarize the students so as to understand and apply the techniques for researching markets and to offer basic research orientation			e		j
3.	To enable the students to prepare report and present the same			e		

UNIT - I Marketing Research

Introduction – Meaning of Marketing research – Kinds of Marketing research – interaction between management and marketing research – marketing research process

UNIT - II Marketing Research Process

The seven steps in designing a research project – inter-relating the steps – research objectives and information needs and developing – marketing research plan

UNIT - III Types of Research

Exploratory – Descriptive – Basic Experimentation

UNIT - IV Data Collection

Sampling-sampling designs and sampling procedure -Kinds of data – search for secondary data – basic methods of primary data collection – observation – interviewing and questionnaire

UNIT - V Report

Research presentation and research process evaluation

TEXT BOOKS:

1. D D Sharma- 1995-Marketing Research Principles, Application and Cases-Sultan Chand Publications-New Delhi
2. Harper W.Boyd, Ralph Westfall, Stanley F Stasch, Marketing research – text and cases, Richard D Irwin Int. Publishers, New York, 2004
3. Suja R Nair 2003 Marketing Research, Himalaya Publications-New Delhi

REFERENCES

1. Naresh K Malhotra, Marketing research – An applied orientation, Pearson Education Publishers, 2000
2. Luck, Marketing Research, Bookwell Publishers, New Delhi 1989
3. Mazumdar, Marketing Research – Text & Applications, Willey Eastern Publishers

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

DEPARTMENT OF MATHEMATICS

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UMA18E81	Basic Statistics	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes					
1.	To apply basics statistics in our day to day life	a					
2.	To solve practical problems	k					

UNIT - I: Basics of statistics

Statistics- Definition - Primary and secondary Data- Limitations of statistics – Statistical methods.

UNIT - II : Diagrammatic Representation

Graphical representation of data- Bar chart- Pie diagram- Classification of data- frequency Histogram- Polygon- Ogive curves

UNIT - III : Measures of Central Tendency

Mean-Median- Mode- properties – Merits- Demerits- graphical method

UNIT - IV : Measures of Dispersion

Measures of Dispersion – Range- Mean deviation about mean –Standard Deviation- Properties- Coefficient of variation.

UNIT - V : Correlation

Simple correlation- Types of Correlation - Rank correlation- Repeated Ranks.

TEXT BOOK:

1. Pillai, R.S.N, Bagavathi, V. (2009),Statistics, Theory and Practice,7Th Edition,S.Chand Ltd,NewDelhi.

REFERENCES:

1. Ken Black, (2013), Business Statistics for Contemporary Decision Making, 7th Edition, John Wiley Publications
2. Gupta, S.P. (2011) ,Applied Statistical Methods ,4th Edition, Sultan Chand & Sons, New Delhi.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	Assessment Tool	Cycle Test I	Cycle Test II	Model Examination	Assignment	Attendance	Total
	Marks	10	10	20	5	5	50
End Semester Weightage							50
Total							100

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UMA18E82	Basic Mathematics	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To apply basics of Mathematical techniques for its usage in Information Technology	a				
2.	To solve practical problems	k				

UNIT - I : Sets, Relations and Functions

Sets - representation of set - types of sets - operation on sets -Venn diagram.

UNIT - II: Symbolic Logic

Logic: Statements, connectives – conjunction- disjunction – negation – tautology- contradiction- logical equivalence

UNIT - III : Normal Forms

Tautological implications- Disjunctive Normal form – Conjunctive normal form – Principal Disjunctive normal form - Principal Conjunctive normal form (Truth table method)

UNIT - IV: Matrices

Ttypes of matrices – addition – subtraction - multiplication of matrices- inverse of the matrix

UNIT - V : Solution of Linear Equation

Matrix method-Cramer's Rule – Rank of the matrix.

TEXT BOOKS:

1. Vittal.P.R.(2012),Business Mathematics,3rd Edition Reprint, Margham Publications, Chennai.
2. Veerarajan, .T.(2006)Discrete Mathematics,7thEdition,Tata-Macgrawhill, New Delhi.

REFRENCES:

1. Vittal.P.R.(2007), Mathematica Foundation, Re-Edition(2007), Margham Publication, Chennai.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	Assessment Tool	Cycle Test I	Cycle Test II	Model Examination	Assignment	Attendance	Total
	Marks	10	10	20	5	5	50
End Semester Weightage							50
Total							100

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	UMA18E83	Numerical Methods	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To apply Numerical methods for prediction purpose.	a				
2.	To solve problems in real life situations.	e				

UNIT - I : Solution for system of linear equations
Gauss elimination method - Gauss – seidal method

UNIT - II : Solution for algebraic and transcendental equations :
Bisection method,-Regula - falsi method,- Newton - Raphson method

UNIT - III: Interpolation
Newton's Forward- backward difference table - Newton forward - backward difference formula for equal intervals.

UNIT - IV Numerical Differentiation
First derivative by Newton's forward and Backward method.

UNIT - V: Numerical Integration
Numerical Integration by Trapezoidal rule -Simpsons 1/3 rd rule - Simpsons 3/8 rule.
Solution for first order differential equations:
Taylor's method - Euler's method - Fourth order Runge-Kutta mehod(for first order differential equations only).

TEXT BOOK:
(1)Numerical Methods by Kandasamy.P, Thilagavathy.K, Gunavathy.K. (2013),Numerical Methods, Reprint S.Chand and Company Ltd., New Delhi.

REFERENCES:

1. Sivaramakrishna Das, P,Vijayakumari, C ,(2013)A Textbook of Numerical Methods,3rdEdition,Dorling Kindersley(India) Pvt. Ltd, licensees of Pearson Education in South Asia.
2. Vittal. P.R , & Malini.V. (2003),Statistical and Numerical methods Margham Publications, Chennai.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	Assessment Tool	Cycle Test I	Cycle Test II	Model Examination	Assignment	Attendance	Total
	Marks	10	10	20	5	5	50
End Semester Weightage							50
Total							100

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
IV	UMA18E84	Resource Management Techniques	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To apply basics of Mathematical techniques for its usage in Information Technology.	a				
2.	To solve practical problems.	e				

UNIT - I

Introduction to operation Research- Principal Components of a decision problem- Phases of Operation research- Linear programming problem – Formulation - Graphical method.

UNIT - II

Transportation problem – North west corner rule method-Least cost method- Row minima method- Column minima method- Vogel's approximation method (Initial Basic feasible solution only).

UNIT - III

Assignment problem - Unbalanced Assignment problem -Travelling Salesmen Problem

UNIT - IV

Zero sum game- Strategies- two person zero sum game- minimax - maximin rule- Games with saddle point- Games without saddle point- Mixed strategies - Graphical method

UNIT - V

Sequencing problem: Processing each of n jobs through m machines - processing n jobs through 2 machines – processing n jobs through 3 machines.

TEXT BOOK:

1. Sundaresan, V, Ganapahy Subramanian, K.S. and Ganesan,K (2011),Resource Management Techniques, A.R.Publications, Nagapattinam.

REFERENCES:

1. Vittal. P.R. (2003), Operations Research, Margham Publications, Chennai.
2. Kanti Swarup, Gupta, P.K. and Manmohan (2006), Operations Research,12th Edition-Sultan Chand & Sons, New Delhi.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

DEPARTMENT OF PHYSICS

SEMESTER	SUBJECT CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UPY18E81	Energy Physics	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES: At the end of this course the learner is expected:		Students Outcomes				
1	To learn the fundamentals of energy sources and applications	b	c			
2	To learn photo thermal based energy systems and applications		c		i	
3	To learn basic principles and applications of photovoltaic systems		c	e	i	
4	To learn the concepts of energy from biomass, wind energy and other sources	b			k	m

UNIT - I INTRODUCTION TO ENERGY SOURCES

World's reserve - Commercial energy sources and their availability-Conventional and non-conventional sources of energy, comparison – Coal- Oil and natural gas - applications - Merits and Demerits-Structure and characteristics of sun-Solar constant -Solar spectrum-Solar radiations outside earth atmosphere - Solar radiation at the earth surface.

UNIT - II PHOTOTHERMAL APPLICATIONS

Basic Principles of Liquid flat plate collector –Materials for flat plate collector - Construction and working-Parameters and efficiency of solar concentrators - Advantage and disadvantage-Solar distillation–Solar disinfection - Solar drying-Solar cooker(box type).

UNIT - III PHOTOVOLTAIC SYSTEMS

Introduction-Photovoltaic principle-Basic Silicon Solar cell- Power output and conversion efficiency-Limitation to photovoltaic efficiency-Basic photovoltaic system for power generation-Advantages and disadvantages-Types of solar cells-Application of solar photovoltaic systems - PV Powered fan – PV powered area lighting system – A Hybrid System.

UNIT - IV ENERGY FROM BIOMASS

Introduction-Biomass conversion technologies-Bio-gas generation-Factors affecting bio-digestion -Working of biogas plant-Advantages and disadvantage of floating and fixed dome type plant-Bio-gas from plant wastes-Methods for obtaining energy from biomass-Advantages and disadvantages of biological conversion of solar energy

UNIT - V WIND ENERGY AND OTHER ENERGY SOURCES

Wind Energy Conversion**-**Classification and description of wind machines, wind energy collectors-Energy storage-Wind data-energy audit- Energy and power from waves- wave energy conversion devices- Fuel cells- and application of fuel cells-batteries- advantages of battery for bulk energy storage- Hydrogen as alternative fuel for motor vehicles.

TEXT BOOKS

1. Kothari D.P., K.C. Singal and Rakesh Ranjan, *Renewable energy sourcesand emerging Technologies*, Prentice Hall of India, 2008.
2. Garg H.P.and Prakash J., *Solar Energy Fundamentals and Application,*
3. TataMcGraw - Hill Publishing, 7th*Reprint 2006.*

REFERENCES

1. Chetan Singh Solanki, *Solar Photvoltaics Fundamentals, Technologies andApplications*, 2ndEdition, PHI Learning Private Limited, 2011.
2. Rai G. D, *Non conventional Energy sources*, 4th Edition, Khanna Publishers, 2010.
3. Jeffrey M. Gordon, *Solar Energy: The State of the Art*, Earthscan, 2013.
4. Kalogirou S.A., *Solar Energy Engineering: Processes and Systems*, 2nd Edition, Academic Press, 2013.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER	COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
III	UPY18E82	Electrical Appliances	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES: At the end of this course the learner is expected:		Students Outcomes				
1	To understand the fundamentals of electrical connections.	b	c			
2	To make the learner familiarize with working of generators and motors.		c	d	i	
3	To acquire knowledge on principles of transformer.		c	d	i	
4	To understand the working principle of electrical appliances.	b			k	m

UNIT - I ELECTRICAL CONNECTIONS

Resistance - Capacitance – Inductance - Electrical charge - Current - Potential and measuring meters –Galvanometer- Ammeter- Voltmeter and multimeter - Electrical energy - Power - Watt - kWh - Consumption of electrical power - AC and Dc - Single phase and three phase connections - RMS and peak values -

House wiring - overloading - Earthing - Short circuiting - Fuses - Colour code for insulation wires - Inverter - UPS - Generator - Motor - Circuit breaker - Electrical switches.

UNIT - II HEATING and WELDING

Electric heating - Modes of transfer of heat - Methods of electric heating - Resistance heating - Induction heating - High frequency eddy current heating - Dielectric heating - Resistance - Welding - Electric arc welding - DC and AC - Welding Equipment - Energy storage welding occupational hazards due to chemical reactions - Industrial heating and welding.

UNIT - III DC GENERATORS and MOTORS

Electro-mechanical energy conversion principle and EMF - Electrical machines - DC Generators - Construction and materials used for various parts of DC generator - Functions of various parts of DC Generator - Working Principle - Working principle of DC motor - back emf - Torque equation for DC motor - DC motor starters - Construction and working of DC motor starters.

UNIT - IV PRINCIPLES AND APPLICATIONS OF TRANSFORMERS

Principle of operation - Constructional details - Core type- Shell type - Classification of transformers - EMF equation - Voltage Ratio - Current ratio - Transformer on no-load - Auto transformer - Principle - Applications. Three phase Transformer - Connections - Star - Star- Star – delta- Delta-star - Parallel operation of transformers - Load sharing - Cooling of transformers - Protective devices and accessories - Losses in transformer.

UNIT - V DOMESTIC ELECTRIC APPLIANCES

Electrical bulbs - Fluorescent lamps - Street lighting - Flood lighting - Electrical fans - wet grinder - Mixer - Water heater - Storage and instant types - Electric iron box - induction heater- Stabilizer - Refrigerator - Microwave oven - Washing Machine - Air Conditioner.

TEXT BOOKS

1. Teraja B.L., *A Text book in Electrical Technology*, S. Chand and Co., 2005.
2. Taylor E.O., *Utilisation of Electrical Energy*, Orient Longman Private Ltd.,2006.

REFERENCES

1. Fitzgerald A. E., David E Higginbothom and Arvin Gabrel, *Basic ElectricalEngineering*, Tata McGraw-Hill Education, 2009.
2. Roman Malaric, *Instrumentation and Measurement in Electrical Engineerin*g, Brown Walker Press, 2011.
3. Clive Maxfield, John Bird, Tim Williams, Walt Kester and Dan Bensky,
4. *Electrical Engineering: Know It All*, Elsevier Inc, 2008.
5. Despande, M.V, *Electrical Machines*, PHI Learning, 2011.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

COURSE CODE	COURSE TITLE	L	T	P	LTP	C
UPY18E83	Fundamentals of Nanoscience And Nanotechnology	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES: At the end of this course the learner is expected:		Students Outcomes				
1	To give a general introduction to different classes of nanomaterials	b	c			
2	To familiarize various synthesis methods of nanomaterials		c	d	e	
3	To understand the characterization techniques involved in nanotechnology		c	d	h	j
4	To familiarize themselves with nanotechnology potentialities	a			k	n

UNIT - I INTRODUCTION TO NANOTECHNOLOGY

Definition of Nano - Scientific revolution-Atomic Structure and atomic size, emergence and challenges of nanoscience and nanotechnology - carbon age-new form of carbon (CNT to Graphene) - influence of nano over micro/macro - size effects and crystals - large surface to volume ratio - surface effects on the properties.

UNIT - II TYPES OF NANOSTRUCTURES AND PROPERTIES OF NANOMATERIALS

Classification based on dimensionality-Quantum Dots, Wells and Wires- Carbon based nanomaterials –buckyballs – nanotubes – graphene – Metal based nano materials-nanogold – nanosilver - metal oxides –Nanocomposites – Nano ceramics - Biological nanomaterials - mechanical-physical-chemical properties.

UNIT - III SYNTHESIS OF NANOMATERIALS

Chemical Methods - Metal nanocrystals by Reduction - Solvothermal Synthesis- Photochemical Synthesis - Sonochemical Routes- Chemical Vapor Deposition (CVD) – Metal Oxide - Chemical Vapor Deposition (MOCVD) - Physical Methods - Ball Milling – Electrodeposition - Green synthesis of nanoparticles using plant extracts.

UNIT - IV CHARACTERISATION OF NANOMATERIALS

Particle size- X-ray Diffraction Peak Broadening method for crystallite size - dislocation density - strain - Photon Correlation Spectroscopy (PCS) - UV –Vis spectroscopy - Transmission Electron Microscopy - Scanning Probe Microscopy -

Differential scanning calorimetry – Principle importance of thermal analysis for nanostructures.

UNIT - V APPLICATIONS OF NANOMATERIALS

Solar energy conversion and catalysis - Molecular electronics and printed electronics -Nanoelectronics - Liquid crystalline systems - Linear and nonlinear optical and electro-optical properties - Applications in displays and other devices - Nanomaterials for data storage - Photonics, Plasmonics- Chemical and biosensors -Nanomedicine and Nanobiotechnology – Nanotoxicology challenges.

TEXT BOOKS

1. Pradeep T., *A Textbook of Nanoscience and Nanotechnology*, Tata McGraw Hill Education Pvt. Ltd., 2012.
2. Hari Singh Nalwa, *Nanostructured Materials and Nanotechnology*, Academic Press, 2002.

REFERENCES

1. Nabok A., *Organic and Inorganic Nanostructures*, Artech House, 2005.
2. Dupas C., Houdy P., Lahmani M., *Nanoscience: Nanotechnologies and Nanophysics*, Springer-Verlag Berlin Heidelberg, 2007.
3. G. Schmidt, *Nanoparticles: From Theory to Applications*, Wiley Publications, 2004.
4. Leon L. Shaw, *Processing & Properties of Structural Nanomaterials*, Royal Society of Chemistry, Cambridge UK 2005.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

SUBJECTCODE	COURSE TITLE	L	T	P	L+T+P	C
UPY18E84	Electronic Communication	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES: At the end of this course the learner is expected:		Students Outcomes				
1	To understand the basic knowledge about amplitude and frequency modulation	b	c			
2	To impart the knowledge about the transmission lines.		c	d		
3	To understand the basic idea about the television.	b	c	d		
4	To develop the knowledge in RADAR and digital communication systems.	a	b	d	k	

UNIT - I AMPLITUDE AND FREQUENCY MODULATION

Modulation - Definition - Types of modulation AM-FM- PM – Expression for amplitude modulated voltage - Wave form of amplitude modulated wave - Collector modulation circuit - Single side band generation - Balanced modulator - AM transmitter - Block diagram and explanation - Frequency modulation - Expression for frequency modulated voltage - Side bands in FM- AM production by transistor modulator - Comparison of AM-FM- PM.

UNIT - II TRANSMISSION LINES

Demodulation - Definition - Diode detection of AM signals - FM detection - Foster Seely discriminator - Radio receivers - Straight receivers - TRF receivers - Super heterodyne receivers - Block diagram - Explanation of each stage - FM receivers – Block diagram – Single and independent side band receiver- Demodulation of SSB and receiver types - Transmission Lines – Characteristics impedance - Losses in transmission line - Standing waves - Smith chart and its applications.

UNIT - III TELEVISION FUNDAMENTALS

Television systems and standards – Black and white transmission - Black and white reception - Plumbicon - Vidicon - Scanning and interlaced scanning – Block diagram of TV transmitter and receiver - Colour TV - Generation R, G, B signals - Simplified block diagram of colour TV transmitter and receiver – TV transmitting antennas - dipole panel - TV receiving antenna - Yagi antenna - Log antenna - Log periodic antenna.

UNIT - IV RADAR SYSTEMS

RADAR - Principle of radar – Radar performance factors - Radar equation - Radar – Pulsed systems - Basic pulsed radar system - Antennas and scanning - Display methods - Pulsed radar systems - Moving target indication - Radar beacons - Transmitting systems - Radar antennas - Duplexer - Radar receivers uses of radar.

UNIT - V DIGITAL COMMUNICATIONS

Digital communications - Digital technology - Fundamentals of data communication systems - Binary number system - Digital electronics – Emergence of data communication systems - Characteristics of data transmission circuits – Digital codes - Error detection and correction - Data sets and inter connection - Requirements - Modern classification - Modern interfacing.

TEXT BOOKS

1. Gupta and Kumar, *Hand book of Electronics*, Pragati Prakhasan, 2005.
2. Kennedy and Davis, *Electronics Communication Systems*, Kennedy and Davis, TMH, 2009.

REFERENCES

1. Wayne Tomasi, *Electronic communication systems*, Dorling Kindersely India Pvt Ltd., 2009.
2. Roy Blake, Electronic communication system, Delmar/Thomson Learning, 2002.
3. Bakshi U.A. and Godse A.P.,*Basic Electronics Engineering*, Technical Publication, 2009.
4. Godse A.P.and Bakshi U.A., *Basic Electronics*,Technical Publication,2009.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

DEPARTMENT OF CHEMISTRY

SEMESTER-III

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UCY18E81	BIOCHEMISTRY	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To develop a sound knowledge of the fundamental concepts in biochemistry.	**a**	**b**			
2.	To enumerate the molecular motif of a living cell, structural and functional hierarchy of biomolecules			**c**		
3.	To emphasis on the various aspects of metabolism and interrelationship of metabolic events.		**b**	**c**		
4.	To gain knowledge about amino acids and proteins and their structural features	**a**	**b**			
5.	To gain knowledge about enzymes, enzymatic reactions and inhibition	**a**	**b**			

UNIT I - AMINO ACIDS AND PROTEINS

Living Cell – Plant and Animal cell. Cell membrane – organelles – functions of major and sub cellular components. Anabolism and catabolism and their relation to metabolism. Amino acids – classification, synthesis of amino acids and their identification. Peptide bond- stereochemistry, synthesis of peptides by solution and solid phase techniques. Proteins – classification – properties-3D structure. Determination of amino acid sequence. Denaturation and renaturation of protein molecules. Separation and purification of proteins – dialysis – gel filtration - electrophoresis. Catabolism of amino acids - Transamination, oxidative deamination, decarboxylation. The urea cycle and other possibilities of detoxification of ammonia.

UNIT - II ENZYMES

Nomenclature, classification and properties-specificity, factors influencing enzyme action. Mechanism of enzyme action – Lock and Key model and induced fit models. Coenzymes – cofactors – prosthetic groups of enzymes (TPP, NAD, NADP, FAD, ATP).Their importance in enzyme action.Mechanism of inhibition (competitive, non- and uncompetitive and allosteric).Immobilization of enzymes.Enzyme specificity.

UNIT - III LIPIDS

Classification - neutral lipids, Phospho lipids (lecithines, cephalins, plasmalogens) and glycolipids – importance, synthesis and degradation. Fatty acids – saturated, unsaturated fatty acids, EFA. Properties – hydrolysis - acid number, saponification number.Auto-oxidation (Rancidity), addition reactions - Iodine value, Polenske

number, Reichert-Meissl number and acetyl number. Hydrogenation of Cholesterol – biosynthesis. Bile salts derived from cholesterol. Metabolism - oxidation of glycerol – oxidation of fatty acids. Biosynthesis of lipids – synthesis of fatty acids and synthesis of triglycerides.

UNIT - IV CARBOHYDRATES

Classification – reducing and non-reducing sugars. Glucose – structure, conformation and stability. Carbohydrates of the cell membrane – starch, cellulose and glycogen.(Structure and utility). Metabolism - Glycolysis and its reversal. TCA cycle - relation between glycolysis and respiration.Principles of bioenergetics, electron transport, chain and oxidative phosphorylation.

UNIT - V NUCLEIC ACIDS

Nucleosides and nucleotides – purine and pyrimidine bases. Nucleic acids - difference between DNA and RNA, classification of RNA. Biosynthesis of DNA - replication. Biosynthesis of mRNA: Transcription. Genetic code – mutations and mutants.DNA repair.Biosynthesis of proteins.DNA sequencing and PCR, recombinant DNA technology, DNA polymorphism.

TEXT BOOKS

1. David L. Nelson and Michael M. Cox (2005): Lehninger, Principles of Biochemistry, 4thedn, Worth Publishers, New York.
2. L. Veerakumari (2004): Biochemistry, MJP publishers, Chennai.

REFERENCES

1. Lubert Stryer (1975): Biochemistry, W. H. Freeman and company, New York..
2. Robert L.Caret, Katherine J. Denniston, Joseph J. Topping, (1993): Principles and Applications of organic and biological chemistry, WBB publishers, USA.
3. J. L. Jain (1999): Biochemistry, Sultan Chand and Co.
4. Mazur and B. Harrow (1971): Text book of biochemistry, 10th Edition, W.B. Saunders Co., Philadelphia.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UCY18E82	Food Chemistry	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To familiarize the students on food chemistry	a	b			
2.	To gain necessary details and information related with the properties and composition of food		b	c		
3.	To know chemistry of carbohydrates, proteins and amino acids	a	b			
4.	To understand the properties and structure of vitamins		b	c	d	
5.	To provide practical training to the students in the food analysis		d	e	g	m

UNIT - I FOOD SCIENCE

Food requirements - Consumer safety – Objectives of food science – Constituents of food – Food as a source of energy – Energy requirement in human body – Food health and disease. Water – Role of water in flood– Dietary requirements and sources – Important physical properties of water – concept of water activity – Water binding in foods – water activity and activity of microorganisms – Controlling of water activity in foods – Experimental determination of water activity in foods

UNIT - II- CARBOHYDRATES

Chemistry of carbohydrates – composition and structure- Definition, classification, importance, monosaccharaides-structure and properties- disarcharides-maltose,lactose, sucrose. Oligosaccharides- raffinose. Polysaccharides-starch, cellulose, pectins , seed gum, sea weed and algal polysaccharides (application only). Dietary sources – Functional properties of dietary carbohydrates- Biological role of Dietary fibre– Nutrition - Flavor and colour development Sweetness – Texturing characteristics of carbohydrates – Plasticizing action and Humectancy of carbohydrates.

UNIT - III FATS AND OILS

Definition and classification of fat –biological role and uses of lipids proximate composition of cereals, pulses, tubers, oil seeds, fruits and vegetables – Fat group classification – Dietary sources – Fatty acids in foods nomenclature – Triglycerides – composition and structure – Physical properties of triglycerides – Polymorphism of triglycerides – Plasticizing properties of fats – Enrobing fats – Emulsifying properties of fats – Rancidity and reversion of fats and activity

UNIT - IV PROTEINS AND ENZYMES

Classification ,structure and functions of aminoacids and proteins- Role of proteins and requirements- Functions of proteins in foods- physical and chemical properties of proteins important protein sources- Milk, Meat, Fish Egg and cereal proteins- Enzymes-Endogenours enzymes in foods and activity of endogenous enzymes

UNIT - V - VITAMINS AND MINERALS

Definition of vitamins – Classification, general sources, structure, properties, functions and dietary requirements – deficiency symptoms of vitamins A,D,E,K,C thiamins, riboflavin, niacin and biotin- role of minerals – Food colours and flavors – Food additives – classification and purpose – Role of thickeners, sweeteners, stabilizers, emulsifiers, leaveners, colours, flavoring agents, preservatives – examples.

TEXT BOOKS

1. Sivasankar, B.., (2002): Food processing and preservation" Prentice – Hall of India Pvt. Ltd. New Delhi
2. SrinivasanDamodaran, Kirk L. Parkin, and O.R. Fennema, E.., (2007) Food Chemistry, 4th Edition, CRC Press, New York.
3. Fox, B. A. and Cameron, A.G.,(2005) Food Science, Nutrition and Health", 5th Edition, Edward Arnold, London.

REFERENCES

1. Charley, H, (1982) Food Science" John Wiley and Sons Inc., New York
2. Birch, G.G., Brennan, J. G. and Parker, K. J.., (1977) :The Sensory Properties of Foods" Applied Science Publication, London.
3. Robinson, D. S.., (1987): Food – Biochemistry and Nutritional Value Longman Scientific and Technical, London.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER IV

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UCY18E83	Basics of Bioinformatics	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To learn the transformation of a chemical structure into a language for computer representation and manipulation	a	b			
2.	To gain knowledge from chemical reactions		b		m	
3.	To teach QSAR model generation and virtual screening			c	l	
4.	To identify drug target molecules and drug designing			c	d	i
5.	To provide applications of computational models	a			e	f

UNIT - I REPRESENTATION AND MANIPULATION OF CHEMICAL STRUCTURES

2D Chemical Structures: Computer representation of chemical structures, Structure and substructure searching, Reaction databases. 3D Chemical Structures: 3D Pharmacophore, Conformational search and analysis of 3D database, Methods to derive 3D pharmacophores.

UNIT - II INTRODUCTION TO PROTEIN MODELING

Amino acids, Protein structure and conformational properties, Ramachandran Plot and dihedral angles, Enzyme mechanisms: Michaelis – Menten kinetics, Introduction of Protein Data Bank (PDB): file format.

UNIT - III COMPUTATIONAL MODELS

Introduction, Deriving a Quantitative Structure Activity Relationship (QSAR) Equation: Simple and Multiple Linear Regression, Designing a QSAR Experiment: Selection of Descriptors, Experimental Design, Indicator variables, Molecular field analysis and Partial Least Squares.

UNIT - IV DRUG DESIGN AND DEVELOPMENT

Drug Discovery Process, Target Identification and Validation, Lead Discovery, Lead Modification, Identification of active part: Pharmacophore, functional group modification,

UNIT - V APPLICATION OF COMPUTATIONAL CHEMISTRY

Prediction of properties of compounds, Lead finding and Optimization, Molecular docking: Searching and scoring algorithm, Computer assisted synthesis design, Design of Combinatorial Chemistry.

TEXT BOOKS

1. Andrew R Leach, Valerie J Gillet, "An Introduction to Chemoinformatics", Kluwer academic publishers, 2003.
2. Rick NG, "Drugs: from Discovery to Approval", John Wiley & sons, 2004.
3. Andrew R Leach, "Molecular Modelling- Principles and applications", Prentice Hall, II edition, 1996.

REFERENCES

1. Johann Gasteiger, Thomas Engel, "Chemoinformatics- A Textbook", Wiley-VCH, 2003.
2. Jürgen Bajorath, "Chemoinformatics: Concepts, Methods, and Tools for Drug Discovery", Humana press, 2004.
3. Garland R Marshall, "Chemoinformatics in Drug Discovery" ,John Wiley & Sons, 2006.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UCY18E84	Molecular Modeling & Drug Design	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end of this course the learner is expected:		Student Outcomes				
1.	To understand the basic concepts of molecular structure, the relationship amongst bio molecular structure, function and force field.		**b**		**m**	
2.	To understand the postulates of quantum mechanics and be able to apply knowledge to electronic structure calculations.	**a**			**m**	
3.	To explain the implication and the structure of the terms in a force-fields			**f**	**l**	
4.	To understand the molecular mechanisms, torsional energy and electrostatic interactions.		**b**			
5.	To identify drug like properties and associated empirical rules and active sites for target based drugs.		**d**		**i**	**n**

UNIT - I CONCEPTS IN MOLECULAR STRUCTURE

Basic concepts of molecular structure (bond length, bond angle, torsion angle and non-covalent interactions – Molecular structure and internal energy – Energy minimization of small molecules – Empirical representation of molecular energies – Use of force fields and the molecular mechanics method –Discussion of global energy minimum – Molecular representation in graphics.

UNIT - II QUANTUM MECHANICS

Postulates of quantum mechanics, electronic structure calculations, ab initio, semi-empirical and density functional theory calculations, molecular size versus accuracy. Approximate molecular orbital theories.

UNIT - III EMPIRICAL FORCE FIELD MODELS

Molecular Mechanisms, energy calculations, Bond stretch, angle bending, torsional term. Electrostatic interaction- Vander waals interactions. Miscellaneous interaction.

UNIT - IV - DRUG DESIGNING

Physicochemical properties of drugs & Introduction to drug designing- Concept of receptor/target site- Lead identification and structure modification- Concepts in molecular recognition, Drug like properties and associated empirical rules, structure

based drug design Conformational search technique- Target structure based Drug Design (Active site identification).

UNIT - V WATER AND SMALL ORGANIC MOLECULES

Non-polarizable and polarizable rigid models. Flexible models and calculation of force constants. Structural and dielectric properties of a polar medium : Continuum models versus molecular models. Calculation of structure, energy and free energy through simulations using molecular models.

TEXT BOOKS

1. Principles and applications of modelling by Leach
2. Molecular Modelling by Hans Pieter, Heltje&GerdFolkens, VCH.

REFERENCES

1. Chemical Applications of Molecular Modelling by Jonathan Goodman. Computational Chemistry by Guy H, Grant & W. Graham Richards, Oxford University Press.
2. Alan Hinchliffe, Molecular Modelling for Beginners, John-Wiley, 2003.
3. N. Cohen (Ed.), Guide Book on Molecular Modeling in Drug Design, Academic Press, San Diego, 1996.
4. D. Frenkel and B. Smith, Understanding Molecular Simulations. From Algorithms to Applications, Academic Press, San Diego, California, 1996

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

DEPARTMENT OF FASHION DESIGNING

SEMESTER III

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UFN18E81	Introduction to Fashion	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end this course the learner is expected:		Student Outcomes				
1.	To know the introduction to fashion	b	c	n	p	h
2.	The subject deals with stages of fashion	n	p	i		
3.	To gain great knowledge about fashion cycle of theories	n	p			

UNIT I

Fashion terms-style-change-acceptance-taste-fashion evolution-fashion cycle-length of cycle-classic fad-cycle within cycle-interrupting and recurring cycle.

UNIT II

Consumer identification with fashion cycle-fashion leaders-fashion innovators-motivators-fashion victims-fashion followers-adoption of fashion-trickledown theory-trickle up theory-trickle across theory.

UNIT III

Fashion forecasting-fashion services & resources-design source.

UNIT IV

Retail fashion promotion-fashion advertising publicity-special events-visual merchandising.

UNIT V

Making of Fashion Magazines - cover page - article on international fashion designers - article on Indian fashion designers

References

1. Fashion from concept to costumes, 6th edition, Gini Stephens Fringes.
2. Books from essentials of fashion.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**

SEMESTER IV

COURSE CODE	COURSE TITLE	L	T	P	L+T+P	C
UFN18E82	Basic Embroidery	2	0	0	2	2

INSTRUCTIONAL OBJECTIVES At the end this course the learner is expected:		Student Outcomes				
1.	To create free hand embroidery designs, to impart practical knowledge in the field of embroidery and to train them as successful entrepreneurs	a	b	g	i	m

UNIT I OUTLINE STITCHES

Running stitch-back stitch-stem stitch-chain stitch-blanket stitch.

UNIT II FILLING STITCHES

Seed stitch-satin stitch-long and short stitch-bullion knot stitch-fish bone stitch.

UNIT III DECORATIVE STITCHES

Feather stitch-lazy daisy stitch-fly stitch-herring bone stitch-french knot stitch.

UNIT IV

Smocking - crochet - quilting - Bead work - chain work.

UNIT V

Cushion Making - pillow making - trimming - finishing.

References

1. Mary Thomas, Mary Thoma's. Embroidery Book, Read Books LTD Publications.
2. Jacqueline Enthoven, The Stitches of Creative Embroidery, 1964.

Course Nature : Theory							
Assessment Method (Max.Marks: 100)							
In Semester	**Assessment Tool**	**Cycle Test I**	**Cycle Test II**	**Model Examination**	**Assignment**	**Attendance**	**Total**
	Marks	**10**	**10**	**20**	**5**	**5**	**50**
End Semester Weightage							**50**
Total							**100**