FACULTY OF ECONOMICS & BUSINESS

SYLLABUS

For

Bachelor of Science (Economics) Honours
Four-Year Degree Program

(Semester I-IV)

(Under Credit-Based Continuous Evaluation Grading System)
(12+3 System of Education)
Session: 2025–26

The Heritage Institution
Kanya Maha Vidyalaya, Jalandhar
(Autonomous)

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULAM OF EXAMINATION OF FOUR YEAR HONOURS DEGREE PROGRAM

Bachelor of Science (Honours) Economics

Session: 2025-26

Semester I										
Course Code	**Course Name**	**Course Type**	**Hours Per Week L-T-P**	**Credits L-T-P**	**Total Credits**	**Marks**				**Examination time (in Hours)**
						Total	**Ext.**		**CA**	
							L	**P**		
BECL-1421 BECL-1031 BECL-1431	Punjabi(Compulsory) [1]Basic Punjabi [2]Punjab History and Culture	C	4-0-0	4-0-0	4	100	70	-	30	3
BECL-1212	English Language Skills -I	AEC	4-0-0	4-0-0	4	100	70	-	30	3
BECL-1175	**Economics**(Microeconomics)	DSC 1	4-0-0	4-0-0	4	100	70	-	30	3
BECL-1453	**Quantitative Techniques** (Quantitative Techniques-I)	DSC 2	4-0-0	4-0-0	4	100	70	-	30	3
BECL-1333	**Mathematics** Algebra	DSC 2	4-0-0	4-0-0	5	100	70	-	30	3
BECP-1333	Algebra Laboratory		0-0-2	0-0-1		50	-	35	15	3
BECM-1134	**Computer Science** (Computer Fundamentals and PC Software) **Computer Science**(Computer Fundamentals and PC Software) (PRACTICAL)	DSC 3	3-0-2	3-0-1	4	100	40	30	30	3+3
BECM-1124	**Computer Applications (Vocational)**(Computer Fundamentals and PC Software) **Computer Applications (**Computer Fundamentals and PC Software) (PRACTICAL)	DSC 3	3-0-2	3-0-1	4	100	40	30	30	3+3
* BECL-1026	BANKING (Banking and Basic operations)	O (Additional)	4-0-0	4-0-0	4	100	70	--	30	2
*BECM-1676	NCC(Army Cadets)	AEC (Optional)	2-0-4	2-0-2	4	100	40	30	30	3+3
*VACF-1491	Foundation Course	VAC	2-0-0	2-0-0	2	50	35	-	15	1
	Total Credits with Quantitative Techniques Total Credits with Mathematics				30 31					

C-Compulsory
AEC-Ability Enhancement Course
DSC- Discipline Specific Course
VAC- Value Added Course
[1] Special paper in lieu of Punjabi (Compulsory).
[2] Special paper in lieu of Punjabi (Compulsory) for those students who are not domicile of Punjab.
***Credits of these courses will not be added towards SGPS/CGPA of the Semester/Programme**

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULAM OF EXAMINATION OF FOUR YEAR HONOURS DEGREE PROGRAM

Bachelor of Science (Honours) Economics

Session: 2025-26

Semester II										
Course Code	**Course Name**	**Course Type**	**Hours Per Week L-T-P**	**Credits L-T-P**	**Total Credits**	**Marks**				**Examination time (in Hours)**
						Total	**Ext.**		**CA**	
							L	**P**		
BECL-2421 BECL-2031 BECL-2431	Punjabi(Compulsory) [1]Basic Punjabi [2]Punjab History and Culture	C	4-0-0	4-0-0	4	100	70	-	30	3
BECL-2212	Appreciating English Literature-I	MDC	4-0-0	4-0-0	4	100	70	-	30	3
BECL-2175	**Economics**(Macroeconomics)	DSC 1	4-0-0	4-0-0	4	100	70	-	30	3
BECL-2453	**Quantitative Techniques** (Quantitative Techniques-II)	DSC 2	4-0-0	4-0-0	4	100	70	-	30	3
BECL-2333	Mathematics (Advanced Calculus)	DSC 2	4-0-0	4-0-0	5	100	70	-	30	3
BECP-2333	Calculus Laboratory		0-0-2	0-0-1		50	-	35	15	3
BECM-2134	**Computer Science** (Programming in C) **Computer Science** (Introduction to Programming in C) (PRACTICAL)	DSC 3	3-0-2	3-0-1	4	100	40	30	30	3+3
BECM-2124	**Computer Applications (Vocational)** (Introduction to Programming using Python) **Computer Applications** (Introduction to Programming using Python) (PRACTICAL)	DSC 3	3-0-2	3-0-1	4	100	40	30	30	3+3
BECM-2170	Statistical Analysis Using Spreadsheet	SEC	1-0-4	1-0-2	3	100	30	40	30	1+1
VACD-2161	Drug Abuse and Ethical Education	VAC	4-0-0	4-0-0	4	100	70	-	30	1+1
	Total Credits with Quantitative Techniques Total Credits with Mathematics				27 28					

C-Compulsory
MDC- multi-Discipline Course
SEC- Skill Enhancement Course
DSC- Discipline Specific Course
VAC- Value Added Course
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Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULAM OF EXAMINATION OF FOUR YEAR HONOURS DEGREE PROGRAM

Bachelor of Science (Honours) Economics

Session: 2025-26

Semester III										
Course Code	**Course Name**	**Course Type**	**Hours Per Week L-T-P**	**Credits L-T-P**	**Total Credits**	**Marks**				**Examination time (in Hours)**
						Total	**Ext.**		**CA**	
							L	**P**		
BECL-3421 BECL-3031 BECL-3431	Punjabi(Compulsory) [1]Basic Punjabi [2]Punjab History and Culture	C	4-0-0	4-0-0	4	100	70	-	30	3
BECL-3212	English Language Skills -II	AEC	4-0-0	4-0-0	4	100	70	-	30	3
BECL-3175	**Economics** (Indian Economy)	DSC 1	4-0-0	4-0-0	4	100	70	-	30	3
BECL-3453	**Quantitative Techniques** (Quantitative Techniques-III)	DSC 2	4-0-0	4-0-0	4	100	70	-	30	3
BECL-3333	**Mathematics** Differential Equations	DSC 2	4-0-0	4-0-0	5	100	70	-	30	3
BECP-3333	Differential Equations Laboratory		0-0-2	0-0-1		50		35	15	3
BECM-3134	**Computer Science** (Computer Oriented Numerical and Statistical Methods) **Computer Science** (Computer Oriented Numerical and Statistical Methods) (PRACTICAL)	DSC 3	3-0-2	3-0-1	4	100	40	30	30	3+3
BECM-3124	**Computer Applications (Vocational)**(Operating System) **Computer Applications (**Operating System (PRACTICAL)	DSC 3	3-0-2	3-0-1	4	100	40	30	30	3+3
VACE-3221	Environmental Studies (Compulsory)	VAC	2-0-0	2-0-0	2	50	35	-	15	3
*VACG-3532	Gender sensitization	VAC	2-0-0	2-0-0	2	50	35	-	15	1
	Total Credits with Quantitative Techniques Total Credits with Mathematics				22 23					

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DSC- Discipline Specific Course
VAC- Value Added Course
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***Credits of these course will not be added towards SGPS/CGPA of the Semester/Programme**

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULAM OF EXAMINATION OF FOUR YEAR HONOURS DEGREE PROGRAM

Bachelor of Science (Honours) Economics

Session: 2025-26

Semester IV										
Course Code	**Course Name**	**Course Type**	**Hours Per Week L-T-P**	**Credits L-T-P**	**Total Credits**	**Marks**				**Examination time (in Hours)**
						Total	**Ext.**		**CA**	
							L	**P**		
BECL-4421 BECL-4031 BECL-4431	Punjabi(Compulsory) [1]Basic Punjabi [2]Punjab History and Culture	C	4-0-0	4-0-0	4	100	70	-	30	3
BECL-4212	Appreciating English Literature-II	MDC	4-0-0	4-0-0	4	100	70	-	30	3
BECL-4175	**Economics** (International Economics)	DSC 1	4-0-0	4-0-0	4	100	70	-	30	3
BECL-4453	**Quantitative Techniques** (Quantitative Techniques-IV)	DSC 2	4-0-0	4-0-0	4	100	70	-	30	3
BECL-4333	Mathematics (Analysis)	DSC 2	4-0-0	4-0-0	5	100	70	-	30	3
BECP-4333	Analysis Laboratory		0-0-2	0-0-1		50		35	15	3
BECM-4134	**Computer Science** (Data Structures)	DSC 3	3-0-2	3-0-1	4	100	40	30	30	3+3
	Computer Science (Data Structures) (PRACTICAL)									
BECM-4124	**Computer Applications (Vocational)** (Relational Database Management Systems)	DSC 3	3-0-2	3-0-1	4	100	40	30	30	3+3
	Computer Applications (Relational Database Management Systems) (PRACTICAL)									
BECM-4170	Contemporary Indian Economic Policies and Issues	SEC	2-0-2	2-0-1	3	100	50	20	30	3+1
*VACM-4502	**Moral Education**	VAC	2-0-0	2-0-0	2	50	35	-	15	1
	Total Credits with Quantitative Techniques Total Credits with Mathematics				29 30					

C-Compulsory
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DSC- Discipline Specific Course
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***Credits of these courses will not be added towards SGPS/CGPA of the Semester/Programme**

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULAM OF EXAMINATION OF THREE YEAR DEGREE PROGRAM

Bachelor of Science (Economics)

Session: 2025-2026

Semester V

Course Code		Course Name	Course Type	Hours Per Week L-T-P	Credits L-T-P	Total Credits	Total Marks	L Marks	P Marks	CA Marks	Examination time (in Hours)
BECL-5421 BECL-5031 BECL-5431		Punjabi(Compulsory) [1]Basic Punjabi [2]Punjab History and Culture	C	4	4-0-0	4	100	80	-	20	3
BECL-5212		English (Compulsory)	C	4	4-0-0	4	100	80	-	20	3
BECL-5175		**Economics** (Economics of Development)	C	4-0-0	4-0-0	4	100	80		20	3
BECL-5453		**Quantitative Techniques** (Quantitative Techniques-V)	E	4-0-0	4-0-0	4	100	80	-	20	3
BECM-5333	I	**Mathematics** (Dynamics)	E	7-0-0 (4-0-0 + 3-0-0)	7-0-0 (4-0-0 + 3-0-0)	7	175 (100 + 75)	140 (80 + 60)	-	35 (20+ 15)	3+3
	II	**Mathematics** (Number Theory)									
BECM-5134		**Computer Science** (Database Management System)	E	3-0-2	3-0-1	4	100	50	30	20	3+3
	P	**Computer Science** (Database Management System) (PRACTICAL)									
BECM-5124		**Computer Applications (Vocational)** (Internet and Web Designing)	E	3-0-2	3-0-1	4	100	50	30	20	3+3
	P	**Computer Applications (**Internet and Web Designing) (PRACTICAL)									
*SECI-5541		Innovation, Entrepreneurship and Creative Thinking	AC	2-0-0	2-0-0	2	50	40	-	10	1

C-Compulsory
E-Elective

AC- Audit Course

[1] Special paper in lieu of Punjabi (Compulsory).

[2] Special paper in lieu of Punjabi (Compulsory) for those students who are not domicile of Punjab.

***Marks of these papers will not be added in total marks and only grades will be provided.**

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULAM OF EXAMINATION OF THREE YEAR DEGREE PROGRAM

Bachelor of Science (Economics)

Session: 2025-2026

Semester VI

Course Code		Course Name	Course Type	Hours Per Week L-T-P	Credits L-T-P	Total Credits	Total Marks	L Marks	P Marks	CA Marks	Examination time (in Hours)
BECL-6421 BECL-6031 BECL-6431		Punjabi(Compulsory) [1]Basic Punjabi [2]Punjab History and Culture	C	4	4-0-0	4	100	80	-	20	3
BECL-6212		English (Compulsory)	C	4	4-0-0	4	100	80	-	20	3
BECL-6175		**Economics** (Quantitative Methods for Economists)	C	4-0-0	4-0-0	4	100	80		20	3
BECL-6453		**Quantitative Techniques** (Quantitative Techniques-VI)	E	4-0-0	4-0-0	4	100	80	-	20	3
BECM-6333	I	Mathematics (Linear Algebra)	E	7-0-0 (4-0-0 + 3-0-0)	7-0-0	7	175 (100 + 75)	140 (80 + 60)		35 (20+ 15)	3+3
	II	Mathematics (Numerical Analysis)									
BECM-6134		**Computer Science** (Information Technology)	E	3-0-2	3-0-1	4	100	50	30	20	3+3
	P	**Computer Science** (Information Technology) (PRACTICAL)									
BECM-6124		**Computer Applications (Vocational)** (Business Data Processing)	E	3-0-2	3-0-1	4	100	50	30	20	3+3
	P	**Computer Applications (** Business Data Processing) (PRACTICAL)									
		Total Credits with Quantitative Techniques Total Credits with Mathematics				24 27					

C-Compulsory
E-Elective

AC- Audit Course

[1] Special paper in lieu of Punjabi (Compulsory).

[2] Special paper in lieu of Punjabi (Compulsory) for those students who are not domicile of Punjab.

***Marks of these papers will not be added in total marks and only grades will be provided.**

Bachelor of Science (Economics) Semester I
Session 2025-26
PUNJABI (COMPULSORY)
COURSE CODE-BARL/BECL

ਸਮਾਂ : 3 ਘੰਟੇ **Maximum Marks: 100**

L-T-P **Theory : 70**

4-0-0 **CA :30**

ਅੰਕ ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ (A-D) ਸੈਕਸ਼ਨ ਹੋਣਗੇ।ਸੈਕਸ਼ਨ A-D ਤੱਕ ਦੇ ਪ੍ਰਸ਼ਨ ਕ੍ਰਮਵਾਰ ਯੂਨਿਟ I-IV ਵਿਚੋਂ ਪੁੱਛੇ ਜਾਣਗੇ। ਹਰ ਯੂਨਿਟ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 14 ਅੰਕ ਹਨ।
4. ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚ ਕਰ ਸਕਦਾ ਹੈ।

ਪਾਠਕ੍ਰਮ ਅਤੇ ਪਾਠ ਪੁਸਤਕਾਂ

ਯੂਨਿਟ-I

ਦੋ ਰੰਗ(ਕਵਿਤਾਭਾਗ) (ਸੰਪਾ.ਹਰਜਿੰਦਰਸਿੰਘਢਿਲੋਂ ਅਤੇ ਪ੍ਰੀਤਮਸਿੰਘ ਸਰਗੋਧੀਆ), ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।

(ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ /ਕਵਿਤਾ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ/ਸਾਰ)

ਯੂਨਿਟ-II

ਸੰਸਾਰਦੀਆਂਪ੍ਰਸਿੱਧਹਸਤੀਆਂ (ਜੀਵਨੀਨੰ: 1 ਤੋਂ 9 ਤੱਕ)

(ਸੰਪਾ.ਪ੍ਰਿੰ. ਤੇਜਾਸਿੰਘ, ਹਰਨਾਮਸਿੰਘਸ਼ਾਨ),ਪੰਜਾਬੀ ਸਾਹਿਤਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।

(ਵਿਸ਼ਾ-ਵਸਤੂ/ਨਾਇਕ ਬਿੰਬ/ ਸਾਰ)

ਯੂਨਿਟ-III

(ੳ) ਪੈਰ੍ਹਾਰਚਨਾ (ਤਿੰਨਵਿਚੋਂਇੱਕ)

(ਅ) ਪੈਰ੍ਹਾਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ।

ਯੂਨਿਟ-IV

(ੳ) ਭਾਸ਼ਾ ਵੰਨਗੀਆਂ : ਭਾਸ਼ਾ ਦਾ ਟਕਸਾਲੀ ਰੂਪ, ਭਾਸ਼ਾ ਅਤੇ ਉਪ੍ਭਾਸ਼ਾ ਵਿਚ ਅੰਤਰ,ਪੰਜਾਬੀ ਉਪਭਾਸ਼ਾਵਾਂ ਦੇ ਪਛਾਣ੍ਚਿੰਨ੍ਹ।

(ਅ) ਪੰਜਾਬੀ ਭਾਸ਼ਾ : ਨਿਕਾਸ ਤੇ ਵਿਕਾਸ

BASIC PUNJABI

In lieu of Punjabi(Compulsory)

COURSE CODE –BARL/BECL-1031

Course outcomes

CO1:ਮੁੱਢਲੀਪੰਜਾਬੀਪੜ੍ਹਾਉਣ ਦਾ ਮਨੋਰਥਵਿਦਿਆਰਥੀਆਂਨੂੰ ਪੰਜਾਬੀਭਾਸ਼ਾਨੂੰ ਸਿਖਾਉਣ ਦੀ ਪ੍ਰਕਿਰਿਆਵਿਚਪਾ ਕੇ ਇਕਹੋਰਭਾਸ਼ਾਸਿੱਖਣ ਦਾ ਮੌਕਾਪ੍ਰਦਾਨਕਰਨਾਹੈ।ਵਿਦਿਆਰਥੀਆਂਨੂੰਪੈਂਤੀਅੱਖਰੀ, ਅੱਖਰਕ੍ਰਮ, ਪੈਰਬਿੰਦੀਵਾਲੇ ਵਰਣ ਅਤੇ ਪੈਰਵਿਚਪੈਣਵਾਲੇ ਵਰਣ ਅਤੇ ਮਾਤਰਾਵਾਂ (ਮੁੱਢਲੀਜਾਣਪਛਾਣ) ਲਗਾਖ਼ਰ (ਬਿੰਦੀ, ਟਿੱਪੀ, ਅੱਧਕ) ਦੀ ਪਛਾਣ ਅਤੇ ਵਰਤੋਂਤੋਂਜਾਣੂ ਕਰਵਾਇਆਜਾਵੇਗਾ।

CO2: ਵਿਦਿਆਰਥੀਆਂਨੂੰਪੰਜਾਬੀਸ਼ਬਦਬਣਤਰਦੀਮੁੱਢਲੀਜਾਣਪਛਾਣ(ਸਾਧਾਰਨਸ਼ਬਦ, ਸੰਯੁਕਤ ਸ਼ਬਦ, ਮਿਸ਼ਰਤਸ਼ਬਦ,ਮੂਲ ਸ਼ਬਦ,ਅਗੇਤਰ ਅਤੇ ਪਿਛੇਤਰ) ਤੋਂਜਾਣੂ ਕਰਵਾਇਆਜਾਵੇਗਾ।

CO3: ਵਿਦਿਆਰਥੀਆਂਨੂੰਨਿੱਤਵਰਤੋਂ ਦੀ ਪੰਜਾਬੀਸ਼ਬਦਾਵਲੀ : ਬਾਜ਼ਾਰ, ਵਪਾਰ, ਰਿਸ਼ਤੇਨਾਤੇ, ਖੇਤੀ ਅਤੇ ਹੋਰਧੰਦਿਆਂਆਦਿਤੋਂਜਾਣੂ ਕਰਵਾਇਆਜਾਵੇਗਾ।

CO4:ਵਿਦਿਆਰਥੀਆਂਨੂੰ ਪੰਜਾਬੀਵਿਚਹਫ਼ਤੇ ਦੇ ਸੱਤਦਿਨਾਂ ਦੇ ਨਾਂ, ਬਾਰ੍ਹਾਂਮਹੀਨਿਆਂ ਦੇ ਨਾਂ, ਰੁੱਤਾਂ ਦੇ ਨਾਂ, ਇਕਤੋਂ ਸੌ ਤੱਕਗਿਣਤੀਸ਼ਬਦਾਂਵਿਚਸਿਖਾਉਣਾ ਹੈ।

Bachelor of Science (Economics) Semester I
Session 2025-26
BASIC PUNJABI
In lieu of Punjabi(Compulsory)
COURSE CODE -BARL/BECL-1031

ਸਮਾਂ : 3 ਘੰਟੇ **Maximum Marks: 100**

L-T-P **Theory :70**

4-0-0 **CA :30**

ਅੰਕਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕਲਈਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨਪੱਤਰ ਦੇ ਚਾਰ (A-D) ਸੈਕਸ਼ਨਹੋਣਗੇ।ਸੈਕਸ਼ਨA-D ਤੱਕ ਦੇ ਪ੍ਰਸ਼ਨਕ੍ਰਮਵਾਰ ਯੂਨਿਟI-IV ਵਿਚੋਂਪੁੱਛੇ ਜਾਣਗੇ। ਹਰ ਯੂਨਿਟਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜਪ੍ਰਸ਼ਨਕਰਨੇ ਹਨ।ਹਰ ਸੈਕਸ਼ਨਵਿਚੋਂਇਕਪ੍ਰਸ਼ਨਕਰਨਾਲਾਜ਼ਮੀਹੈ।ਪੰਜਵਾਂਪ੍ਰਸ਼ਨਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨਵਿਚੋਂਕੀਤਾਜਾ ਸਕਦਾਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 14 ਅੰਕਹਨ।
4. ਪੇਪਰ ਸੈੱਟਕਰਨਵਾਲਾਜੇਕਰਚਾਹੇ ਤਾਂਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡਅੱਗੋਂਵੱਧਤੋਂਵੱਧਚਾਰਉਪ ਪ੍ਰਸ਼ਨਾਂਵਿਚਕਰ ਸਕਦਾਹੈ।

ਪਾਠਕ੍ਰਮ

ਯੂਨਿਟ-I

ਪੈਂਤੀਅੱਖਰੀ, ਅੱਖਰਕ੍ਰਮ, ਪੈਰਬਿੰਦੀਵਾਲੇ ਵਰਣ ਅਤੇ ਪੈਰਵਿਚਪੈਣਵਾਲੇ ਵਰਣ ਅਤੇ ਮਾਤ੍ਰਵਾਂ (ਮੁੱਢਲੀ ਜਾਣਪਛਾਣ) ਲਗਾਖ਼ਰ (ਬਿੰਦੀ, ਟਿੱਪੀ, ਅੱਧਕ) : ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ ।

ਯੂਨਿਟ-II

ਪੰਜਾਬੀਸ਼ਬਦਬਣਤਰ : ਮੁੱਢਲੀਜਾਣਪਛਾਣ(ਸਾਧਾਰਨਸ਼ਬਦ, ਸੰਯੁਕਤਸ਼ਬਦ, ਮਿਸ਼ਰਤਸ਼ਬਦ, ਮੂਲ ਸ਼ਬਦ, ਅਗੇਤਰ ਅਤੇ ਪਿਛੇਤਰ)

ਯੂਨਿਟ-III

ਨਿੱਤਵਰਤੋਂ ਦੀ ਪੰਜਾਬੀਸ਼ਬਦਾਵਲੀ : ਬਾਜ਼ਾਰ, ਵਪਾਰ, ਰਿਸ਼ਤੇਨਾਤੇ, ਖੇਤੀ ਅਤੇ ਹੋਰਧੰਦਿਆਂਆਦਿਨਾਲ ਸੰਬੰਧਤ।

ਯੂਨਿਟ-IV

ਹਫ਼ਤੇ ਦੇ ਸੱਤਦਿਨਾਂ ਦੇ ਨਾਂ, ਬਾਰ੍ਹਾਂਮਹੀਨਿਆਂ ਦੇ ਨਾਂ, ਰੁੱਤਾਂ ਦੇ ਨਾਂ, ਇਕਤੋਂ ਸੌ ਤਕ ਗਿਣਤੀਸ਼ਬਦਾਂਵਿਚ ।

ENGLISH LANGUAGE SKILLS-I

Course Code: BARL/BECL-1212

(NEP-2020)

COURSE OUTCOMES

After passing this course, the students will be able to:

CO 1: understand fundamental grammatical rules governing tenses, the use of modal verbs and make correct usage in their language through the study of "English Grammar in Use" by Raymond Murphy

CO 2: to develop the art of creative expression by writing a paragraph on any given topic

CO 3: comprehend the meaning of texts and answer questions related to situations, episodes, and characters depicted in them through the study of the essays in the text "Prose for Young Learners"

CO 4: appreciate the writings of various Indian and foreign story and prose writers and relate them to their socio-cultural milieu through the study of the essays in the text "Prose for Young Learners"

Bachelor of Science (Economics) Semester I
Session 2025-26
ENGLISH LANGUAGE SKILLS-I
Course Code: BARL/BECL -1212
(NEP-2020)

Examination Time: 3 Hrs **Max. Marks: 100**

Theory: 70

L-T-P (Credits): 4-0-0 **CA: 30**

Instructions for the Examiner:
Eight questions are to be set, two from each of the four Units (I-IV). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any section. Each question will carry 14 marks. (14x5=70)

UNIT-I

English Grammar in Use, 5th Edition by Raymond Murphy, CUP (Units: 1-37)

UNIT-II

Paragraph Writing and English Grammar in Use (Units: 38-48)

UNIT-III

Prose for Young Learners: Essays at Sr. No. 1, 2, 3, 5 and 6

UNIT-IV

Prose for Young Learners: Essays at Sr. No. 7, 8, 9, 10 and 11

Texts Prescribed:

1. *English Grammar in Use* (Fifth Edition) by Raymond Murphy, CUP
2. *Prose for Young Learners* (Guru Nanak Dev University, Amritsar)

(1/1)

Bachelor of Science (Economics) Semester–I
Session 2025-26
Course Code: BECL-1175
Economics (Microeconomics)

Course outcomes:

After passing this course, students will be able to

CO1: describe and apply the methods of analyzing consumer behavior through demand and supply, elasticity and utility.

CO2: learn about the various cost and revenue curves and the production function.

CO3: learn about various market structures.

CO4: understand various theories of rent, interest, profit, and distribution.

Bachelor of Science (Economics) Semester I
Session 2025-26
Course Code: BECL-1175
Economics (Microeconomics)

Time: 3 Hours

L-T-P (Credits):4-0-0
Max. Marks: 100
Theory: 70
CA: 30

Note: Instructions for the Paper Setter:
Two questions, each carrying 14 marks, from each of the Units I-IV (i.e., a total of eight questions) are to be set. Candidates are required to attempt five questions, selecting at least one from each unit. The fifth question may be attempted from any unit.

UNIT–I

Introductory: Definition of Economics, Nature, Scope, and Assumptions of Microeconomics. Demand Function, Supply Function, Price Determination, Elasticity of Demand – Price, Income and Cross elasticities and their Measurement.
Utility Analysis: Law of Diminishing Marginal Utility and Law of Equi-Marginal Utility, Indifference Curve Analysis and Revealed Preference Analysis (Meaning and Equilibrium).

UNIT–II

Theory of Production and Costs: Concept of Production Function. Laws of Returns to Scale and Returns to Factor
Cost: Concepts and Cost Curves in the short and in the long run; Traditional and Modern Cost Theories, Revenue Curves and their relationship with the elasticity of demand.

UNIT–III

Market forms: Perfect Competition- Assumptions, Price and Output determination of firm and Industry in the short run and long run; Monopoly- Assumptions and Equilibrium.
Monopolistic Competition- Assumptions and Equilibrium (except Group Equilibrium).

UNIT–IV

Marginal Productivity Theory; Factor pricing (with reference to labour) under Perfect Competition and Imperfect Competition, Modern Theory of Distribution.
Rent: Concept, Ricardian Theory and Modern Theory of Rent.
Interest: Concept, Classical Theory, Loanable Funds Theory.
Profit: Concept, Risk and Uncertainty Theories.

Case Study: Elasticity of Demand and Monopolistic Competition

Suggested Readings:

1. Ahuja, H.L. (3018), *Advanced Economics Theory: Micro Economics analysis*, S. Chand Publishing, New Delhi
2. Dwivedi, D.N. (3018), *Microeconomics: Theory and Applications*, Pearson Education, New Delhi.
3. Koutsoyiannis, A. (3015), Modern *Microeconomics*, Macmillan Press, London.
4.Sen, A.(3007), *Microeconomics: Theory and Applications*, Oxford University Press, New Delhi.
Note: The latest editions of the books are recommended.

Bachelor of Science (Economics) Semester –I

Session: 2025-26

Course Code: BECL-1453

Quantitative Techniques–I

Course outcomes:

After passing this course, students will be able to:

CO1: organize, manage and present data.

CO2: analyze the data by using central tendency, dispersion and skewness.

CO3: learn the relationship between variables and prediction using correlation and regression.

CO4: compare magnitudes of related variables to each other over a period of time with the help of index numbers and understand the concept of time series in analyzing economic problems.

Bachelor of Science (Economics) Semester –I

Session 2025-26
Course Code: BECL-1453
Quantitative Techniques–I

Time: 3 Hours

L-T-P (Credits):4-0-0
Max. Marks: 100
Theory: 70
CA: 30

Note: Instructions for the Paper–Setters:
Two questions, each carrying 14 marks, from each of Units I-IV (i.e., a total of eight questions) are to be set. Candidates are required to attempt five questions, selecting at least one from each unit. The fifth question may be attempted from any unit.

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UNIT–I

Statistics: Definition, Scope in Economics, Significance, Limitations. Classification, Tabulation, Diagrammatic and Graphical Representation of Data.

UNIT–II

Concepts and Measures of Central Tendency: Means, Median, Mode, GM, and HM. Concepts and Measures of Relative Dispersion, Concepts and Measures of Skewness (Stress on Numerical Examples).

UNIT–III

Correlation Analysis: Introduction, Importance, Karl-Pearson's Coefficient of Correlation, Spearman's Rank Correlation Coefficient, Simple Regression Analysis; Difference Between Correlation and Regression, Lines of Regression, Properties of Correlation and Regression Coefficients (Stress on Numerical Examples).

UNIT–IV

Index Numbers: Concept of Index Number, Purpose Construction & Problems, Laspeyre's, Paasche's and Fisher's Formulae, Tests of Consistency.
Analysis of Time Series: Definition, Components of Time Series, Measurement of Trend by Different Methods, Measurement of Seasonal Variations (Stress on Examples).

Suggested Readings:

1. Gupta, S.P. (3014), *Statistical Methods*, Sultan Chand & Sons, New Delhi.
2. Croxton, F.E., Cowden D.J. and Klein, S. (1973), *Applied General Statistics*, 3rd. Ed., Prentice Hall of India, New Delhi.
3. Nagar, A.L. and Das, R.K. (1976), *Basic Statistics*, Oxford University Press, Bombay.

Note: The latest editions of the books are recommended.

Bachelor of Arts/ Bachelor of Science (Honours)
Semester–I
Session: 2025-26
Course Title: Mathematics (Algebra)
Course Code: BARL/ BECL-1333
Course Outcomes

After passing this course, the students will be able to:

CO 1: Understand the concept of matrix congruence of skew symmetric matrices and its reduction in real field. Solve system of linear equations.

CO 2: Obtain Eigen values, Eigen vectors, minimal and characteristic equation of a matrix and to apply it in advanced dynamics and electric current.

CO 3: Classify real quadratic form in variables, definite, semi- definite and indefinite real quadratic form.

CO 4: To find the relations between the roots and coefficients of general polynomial equation in one variable, distinguish between solution of cubic equations and Bi-quadratic equations.

Bachelor of Arts/ Bachelor of Science (Honours)
Semester–I
Session: 2025-26
Course Title: Mathematics (Algebra)
Course Code: BARL/ BECL-1333

Examination Time: 3 Hours **Max. Marks: 100**

L T P **Theory: 70**

4 0 0 **CA: 30**

Instructions for the Paper Setter: Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

Unit I

Partitioning of Matrices, Matrices Partitioned conformably for Multiplication, Rank of a Matrix, Normal form, Row rank, Column rank of a matrix, Equivalence of column and row ranks, rank of product of matrices, Linear independence of row and column vectors Applications of matrices to a system of linear (both homogeneous and non–homogeneous) equations. Theorems on consistencyof a system of linear equations.

Unit II

Eigenvalues, Eigenvectors, Hermitian Matrix, Skew Hermitian matrix and unitary matrix and properties of Eigen value, minimal and the characteristic equation of a matrix. Cayley Hamilton theorem and its use in finding inverse of a matrix.

Unit III

Quadratic Forms, quadratic form as a product of matrices. The set of quadratic forms over a field. Congruence of quadratic forms and matrices. Congruent transformations of matrices. Elementary congruent transformations. Congruent reduction of a symmetric matrix. Reduction in the real field. Classification of real quadratic forms in n variables. Definite, semi–definite and indefinite real quadratic forms. Characteristic properties of definite, semi–definite and indefinite forms.

Unit IV

Relations between the roots and coefficients of general polynomial equation of degree n in one variable. Vieta ‘s Formula, Fundamental Theorem of Algebra (Statement only) Transformation of equations, Equations of Squared differences, Solution of cubic equations by Cardan method, Discriminant of polynomial equation, Discriminant of Cubic equation, nature of roots of cubic, Solution of Biquadratic by Ferrari’s Method with illustrations, Descartes’s Rules of Signs with illustrations.

Text Books:-

1. Shanti Narayan and P.K. Mittal: Text Book of Matrices.
2. K.B. Datta : Matrix and Linear Algebra, Prentice Hall of India Pvt. Ltd., New Delhi, 2000.

Reference Book:-

1. Tom M. Apostol: Calculus: An Indian Adaptation, Wiley India, 2023

Bachelor of Arts/ Bachelor of Science (Honours)
Semester–I
Session: 2025-26
Course Title: Algebra Laboratory
Course Code: BARP/ BECP-1333

Course Outcomes

After passing this course, the students will be able to:

CO 1: Understand the concept of matrix congruence of skew symmetric matrices and its reduction in the real field. Solve a system of linear equations.

CO 2: Obtain Eigenvalues, Eigen vectors, minimal and characteristic equation of a matrix and to apply it in advanced dynamics and electric current.

CO 3: Classify real quadratic form in variables, definite, semi- definite and indefinite real quadratic form.

CO 4: To find the relations between the roots and coefficients of general polynomial equation in one variable, distinguish between solution of cubic equations and Bi-quadratic equations

Bachelor of Arts/ Bachelor of Science (Honours)
Semester–I
Session: 2025-26
Course Title: Algebra Laboratory
Course Code: BARP/ BECP-1333

Examination Time: 3 Hours **Max. Marks: 50**
Practical: 35
L T P **CA: 15**
0 0 1

List of Practicals (using any package)

1. Introduction to the computer package in the practicals.
2. Matrix operations: addition, multiplication, inverse. Transpose, determinant of matrix.
3. Find Rank of matrix: Row Rank, Column Rank.
4. Find row reduced echelon form
5. Create the coefficient matrix A and vector b. Solve for x using the inverse, using the built-in function.
6. Solving a linear system, using Gauss elimination numerically.
7. Finding eigenvalues and eigenvectors, numerically.

Reference Books:-

1. S.S. Sastry, Engineering Mathematics - Volume I (4th Edition), PHI, 2008.
S.S. Sastry, Engineering Mathematics - Volume II (4th Ed

Bachelor of Arts (Honours)/Bachelor of Science (Economics) (Honours) Semester- I
Session 2025-26
Course Code: BARM-1134, BECM-1134
COMPUTER SCIENCE
(COMPUTER FUNDAMENTALS AND PC SOFTWARE)

Course Outcomes:

After passing this course the student will be able to:

CO1: comprehend about computer hardware, operating system concepts and various system software.

CO2: Identify various input, output and memory devices.

CO3: Apply office automation software to create professional and academic documents.

CO4: Apply skills to make effective presentations using associated application software.

Bachelor of Arts (Honours) / Bachelor of Science (Computer Science) (Honours)/ Bachelor of Science (Economics) (Honours) Semester- I

Session 2025-26

Course Code: BARM-1134, BECM-1134

COMPUTER SCIENCE

(COMPUTER FUNDAMENTALS AND PC SOFTWARE)

Examination Time: 3 Hrs. **Max. Marks: 100**

Theory: 40

L-T-P: 3-0-1 **Practical: 30**

Credits: 4 **CA: 30**

Instructions for Paper Setter -

Eight questions of equal marks (08 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT I

Fundamentals of Computer: Introduction to computer, Applications of computer, Components of computers (Input unit, Output Unit, Memory Unit & CPU), type of Software, Translators (compiler, interpreter, assembler), Booting a System.

UNIT II

Input and Output Devices: Keyboards, Mouse, Joystick, Track Ball, Light Pen and Data Scanning devices (scanner, OCR, OMR, MICR, Bar Code Reader, Card Reader), Monitor, Printers (laser printer, dot matrix printer, ink jet printer).

Memories: Primary Memory-RAM and ROM. Secondary Memory- Hard Disk. Introduction to Windows based operating system and Desktop icons.

UNIT III

Word Processing: Introduction to word, Parts of window of word (Title bar, menu bar, status bar, and ruler), understanding the Ribbon, Use of Office Button and Quick Access Toolbar, Creation of new documents, opening document.

Page setup, margins, gutters, font properties, Alignment, page breaks, header & footer, deleting, moving, replace, editing text in document, saving a document, spell checker, printing a document.

Creating a table, entering and editing, Text in tables. Changing format of table, height, width of row/column. Editing, deleting Rows, columns in table. Adding picture, page colors and Watermarks, Borders and shading, Templates, Mail Merge.

UNIT IV

PowerPoint Presentation: Introduction to PowerPoint, starting a new slide, saving presentation, moving/rearranging slides, printing slides.

Applying theme to presentation, Views (slide View, slide sorter, notes view, outline view), Formatting & enhancing text formatting.

Creating a graph, displaying slide show, adding multimedia. Slide transitions, applying Animation, Timing slide display, adding movies & sounds.

References:

1. Anshuman Sharma, A book of Fundamentals of Information Technology, Lakhanpal Publishers, 5th Edition.
2. Prof. Satish Jain, M. Geetha, Kratika, BPB's Office 2010 Course Complete Book, BPB Publications, 2017.
3. Joyce Cox, Joan Lambert and Curtis Frye, Microsoft office Professional 2010 Step by Step, Microsoft Press, 2010.

4.V. Rajaraman, Neeharika Adabala, Fundamentals of Computers, PHI Learning, 2015.
5.P.K. Sinha, Computer Fundamentals, BPB Publications, 2004.

Note: The latest editions of the books should be followed.

Bachelor of Arts (Honours) / Bachelor of Science (Economics) (Honours) Semester- I
Session 2025-26
Course Code: BARM-1134, BECM-1134
COMPUTER SCIENCE
(COMPUTER FUNDAMENTALS AND PC SOFTWARE)
(PRACTICAL)

Examination Time: 3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical: 30**
Credits: 4 **CA: 30**

Practical based on PC Software - Office.

Bachelor of Arts / Bachelor of Science(Economics) Semester I
Session 2025-26
COURSE CODE: BARM-1124, BECM-1124
COMPUTER APPLICATIONS (VOCATIONAL)
(COMPUTER FUNDAMENTALS ANDPC SOFTWARE)

Course Outcomes:

After passing this course the student will be able to:

CO1: comprehend about computer hardware, operating system concepts and various system software.

CO2: Identify various input, output and memory devices.

CO3: Apply office automation software to create professional and academic documents.

CO4: Apply skills to make effective presentations using associated application software.

Bachelor of Arts / Bachelor of Science(Economics) Semester I (Session 2025-26)
COURSE CODE: BARM-1124, BECM-1124
COMPUTER APPLICATIONS (VOCATIONAL)
(COMPUTER FUNDAMENTALS AND PC SOFTWARE)
(THEORY)

Examination Time: 3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical: 30**
Credits: 4 **CA: 30**

Instructions for Paper Setter -
Eight questions of equal marks (08 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT I

Fundamentals of Computer: Introduction to computer, Applications of computer, Components of computers (Input unit, Output Unit, Memory Unit & CPU), type of Software, Translators (compiler, interpreter, assembler), Booting a System.

UNIT II

Input and Output Devices: Keyboards, Mouse, Joystick, Track Ball, Light Pen and Data Scanning devices (scanner, OCR, OMR, MICR, Bar Code Reader, Card Reader), Monitor, Printers (laser printer, dotmatrix printer, ink jet printer). **Memories: Primary Memory**-RAM and ROM. **Secondary Memory** - Hard Disk, CD, DVD. Introduction to Windows based operating system and Desktop icons.

UNIT III

Word Processing: Introduction to word, Parts of window of word (Title bar, menu bar, status bar, and ruler), Understanding the Ribbon, Use of Office Button and Quick Access Toolbar, Creation of new documents, opening document, insert a document into another document. Page setup, margins, gutters, font properties, Alignment, page breaks, header & footer, deleting, moving, replace, editing text in document, saving a document, spell checker, printing a document. Creating a table, entering and editing, Text in tables. Changing format of table, height, width of row/column. Editing, deleting Rows, columns in table. Adding picture, page colors and Watermarks, Borders and shading, Templates, wizards, Mail Merge.

UNIT IV

PowerPoint: Introduction to PowerPoint, Exploring menus, starting a new slide, saving presentation, moving/rearranging slides, printing slides. Applying theme to presentation, Views (slide View, slide sorter, notes view, outline view), Formatting & enhancing text formatting. Creating a graph, displaying slide show, adding multimedia. Slide transitions, applying Animation, Timing slide display, adding movies & sounds. Using a pick look Wizards to change format.

References:

1. Anshuman Sharma, A book of Fundamentals of Information Technology, Lakhanpal Publishers, 5th Edition.
2. Prof. Satish Jain, M. Geetha, Kratika, BPB's Office 2010 Course Complete Book, BPB Publications, 2017.
3. Joyce Cox, Joan Lambert and Curtis Frye, Microsoft office Professional 2010 Step by Step, Microsoft Press, 2010.
4. V. Rajaraman, NeeharikaAdabala, Fundamentals of Computers, PHI Learning, 2015.
5. P.K. Sinha, Computer Fundamentals, BPB Publications, 2004.

Note: The latest editions of the books should be followed.

Bachelor of Arts / Bachelor of Science(Economics) Semester I
Session 2025-26
COURSE CODE: BARM-1124,BECM-1124

COMPUTER APPLICATIONS (VOCATIONAL)
(COMPUTER FUNDAMENTALS AND PC SOFTWARE)
(PRACTICAL)

Examination Time: 3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical: 30**
Credits: 4 **CA: 30**

Instructions for the examiners: - Two questions of equal marks strictly as per the syllabus and based on the practical exercises covered in the semester. Questions may be subdivided into parts (not exceeding four). Candidates will attempt ONE question, explain their answer by writing on the answer sheet, and then implement the same on the computer. Examiner will evaluate both the answers (theory as well as practical). The viva should also be conducted alongside, and the student is asked viva questions related to the question and the solution he/she is working on during the exam.
Students will prepare a report after analyzing print and social media advertisements along with the local market survey to understand the desktop/laptop vendors and prices. Arrange the options available as per price/performance preferences.

Lab exercises based on:

- Practice the Windows Operating System command line and the GUI for user interaction, personalization, and file management
- Document preparation with Word using the features mentioned in the syllabus
- Presentation preparation with PowerPoint using the features mentioned in the syllabus

Bachelor of Arts / Bachelor of Science(Economics) Semester II
Session 2025-26
PUNJABI (COMPULSORY)

COURSE CODE-BARL/BECL-2421

ਸਮਾਂ : 3 ਘੰਟੇ **Maximum Marks: 100**
L-T-P **Theory : 70**
4-0-0 **CA :30**

ਅੰਕ ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ (A-D) ਸੈਕਸ਼ਨ ਹੋਣਗੇ।ਸੈਕਸ਼ਨ A-D ਤੱਕ ਦੇ ਪ੍ਰਸ਼ਨ ਕ੍ਰਮਵਾਰ ਯੂਨਿਟ I-IV ਵਿਚੋਂ ਪੁੱਛੇ ਜਾਣਗੇ। ਹਰ ਯੂਨਿਟ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 14 ਅੰਕ ਹਨ।
4. ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚ ਕਰ ਸਕਦਾ ਹੈ।

ਪਾਠਕ੍ਰਮ ਅਤੇ ਪਾਠ ਪੁਸਤਕਾਂ

ਯੂਨਿਟ-I

ਦੋ ਰੰਗ(ਕਹਾਣੀਭਾਗ) (ਸੰਪਾ.ਹਰਜਿੰਦਰਸਿੰਘਢਿਲੋਂ ਅਤੇ ਪ੍ਰੀਤਮਸਿੰਘ ਸਰਗੋਧੀਆ),ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
(ਵਿਸ਼ਾ-ਵਸਤੂ/ਪਾਤਰ ਚਿਤਰਨ/ਸਾਰ)

ਯੂਨਿਟ-II

ਸੰਸਾਰਦੀਆਂਪ੍ਰਸਿੱਧਹਸਤੀਆਂ(ਜੀਵਨੀਨੰ: 10 ਤੋਂ18 ਤਕ)(ਸੰਪਾ.ਪ੍ਰਿੰ. ਤੇਜਾਸਿੰਘ, ਹਰਨਾਮਸਿੰਘਸ਼ਾਮ), ਪੰਜਾਬੀ ਸਾਹਿਤਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
(ਵਿਸ਼ਾ-ਵਸਤੂ/ਨਾਇਕ ਬਿੰਬ/ ਸਾਰ)

ਯੂਨਿਟ-III

(ੳ) ਸ਼ਬਦਬਣਤਰ ਅਤੇ ਸ਼ਬਦਰਚਨਾ : ਪਰਿਭਾਸ਼ਾ, ਮੁੱਢਲੇ ਸੰਕਲਪ।
(ਅ) ਸ਼ਬਦਸ਼੍ਰੇਣੀਆਂ

ਯੂਨਿਟ-IV

(ੳ) ਦਫ਼ਤਰੀਚਿੱਠੀਪੱਤਰ
(ਅ) ਮੁਹਾਵਰੇ/ਅਖਾਣ

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Course outcomes

CO1:ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ : ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ (ਨਾਂਵ, ਪੜਨਾਂਵ, ਕਿਰਿਆ, ਵਿਸ਼ੇਸ਼ਣ, ਕਿਰਿਆਵਿਸ਼ੇਸ਼ਣ, ਸਬੰਧਕ, ਯੋਜਕ ਅਤੇ ਵਿਸਮਿਕ)ਨੂੰ ਪੜ੍ਹਾਉਣ ਦਾ ਮਨੋਰਥਵਿਦਿਆਰਥੀਆਂਅੰਦਰਪੰਜਾਬੀਭਾਸ਼ਾ ਦੀ ਅਮੀਰੀ ਦਾ ਅਤੇ ਬਾਰੀਕੀਆਂਨੂੰ ਸਮਝਣਲਈਵੱਖਰੇ -ਵੱਖਰੇ ਸਿਧਾਂਤਾਂ ਦਾ ਵਿਕਾਸ ਕਰਨਾਹੈ।

CO2: ਵਿਦਿਆਰਥੀਪੰਜਾਬੀਵਾਕਬਣਤਰ(ਸਾਧਾਰਨਵਾਕ, ਸੰਯੁਕਤ ਵਾਕ, ਮਿਸ਼ਰਤਵਾਕ, ਬਿਆਨੀਆਵਾਕ, ਪ੍ਰਸ਼ਨਵਾਚਕਵਾਕ ਅਤੇ ਹੁਕਮੀਵਾਕ) ਦੀ ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਇਸ ਦੀ ਬਣਤਰਤੋਂਜਾਣੂ ਹੋਣਗੇ ਅਤੇ ਉਨ੍ਹਾਂ ਦੀ ਭਾਸ਼ਾ ਤੇ ਪਕੜਮਜਬੂਤ ਹੋਵੇਗੀ।

CO3: ਪੈਰ੍ਹਾਰਚਨਾ ਅਤੇ ਸੰਖੇਪ ਰਚਨਾ ਦਾ ਮਨੋਰਥਵਿਦਿਆਰਥੀਆਂ ਦੀ ਬੁੱਧੀਨੂੰ ਤੀਖਣਕਰਦਿਆਂਉਨਾਂ ਦੀ ਲਿਖਣਪ੍ਰਤਿਭਾਨੂੰ ਉਜਾਗਰਕਰਨਾਹੈ।

CO4: ਘਰੇਲੂ ਅਤੇ ਦਫ਼ਤਰੀਚਿੱਠੀਪੱਤਰਲਿਖਣ ਦਾ ਮਨੋਰਥਵਿਦਿਆਰਥੀਆਂਨੂੰ ਇਸ ਕਲਾਵਿਚਨਿਪੁੰਨਕਰਨਾ ਹੈ ।ਅਖਾਣਅਤੇ ਮੁਹਾਵਰੇਦੀ ਵਰਤੋਂਨਾਲਗੱਲਬਾਤਵਿਚਪਰਪੱਕਤਾਆਉਂਦੀ ਹੈ।ਇਹਵਿਦਿਆਰਥੀਆਂ ਦੀ ਗੱਲਬਾਤਵਿਚਨਿਖਾਰਲਿਆਉਣ ਦਾ ਕੰਮਕਰਨਗੇ।

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ਸਮਾਂ : 3 ਘੰਟੇ **Maximum Marks: 100**
L-T-P **Theory :70**
4-0-0 **CA :30**

ਅੰਕ ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ (A-D) ਸੈਕਸ਼ਨ ਹੋਣਗੇ। ਸੈਕਸ਼ਨ A-D ਤੱਕ ਦੇ ਪ੍ਰਸ਼ਨ ਕ੍ਰਮਵਾਰ ਯੂਨਿਟ I-IV ਵਿਚੋਂ ਪੁੱਛੇ ਜਾਣਗੇ। ਹਰ ਯੂਨਿਟ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।

2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।

3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 14 ਅੰਕ ਹਨ।

4. ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚ ਕਰ ਸਕਦਾ ਹੈ।

ਪਾਠਕ੍ਰਮ

ਯੂਨਿਟ-I

ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ : ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ (ਨਾਂਵ, ਪੜਨਾਂਵ, ਕਿਰਿਆ, ਵਿਸ਼ੇਸ਼ਣ, ਕਿਰਿਆਵਿਸ਼ੇਸ਼ਣ, ਸਬੰਧਕ, ਯੋਜਕ ਅਤੇ ਵਿਸਮਿਕ)

ਯੂਨਿਟ-II

ਪੰਜਾਬੀਵਾਕਬਣਤਰ : ਮੁੱਢਲੀਜਾਣਪਛਾਣ
(ੳ) ਸਾਧਾਰਨਵਾਕ, ਸੰਯੁਕਤਵਾਕ ਅਤੇ ਮਿਸ਼ਰਤਵਾਕ (ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ)
(ਅ) ਬਿਆਨੀਆਵਾਕ, ਪ੍ਰਸ਼ਨਵਾਚਕਵਾਕ ਅਤੇ ਹੁਕਮੀਵਾਕ (ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ)

ਯੂਨਿਟ-III

ਪੈਰ੍ਹਾਰਚਨਾ
ਸੰਖੇਪ ਰਚਨਾ

ਯੂਨਿਟ-IV

ਚਿੱਠੀਪੱਤਰ (ਘਰੇਲੂ ਅਤੇ ਦਫ਼ਤਰੀ)
ਅਖਾਣਅਤੇ ਮੁਹਾਵਰੇ (ਲਿਸਟਨਾਲਨੱਥੀ ਹੈ)

ਅਖਾਣ

ਉਠੇ ਤਾ ਉੱਠ ਨਹੀਂ ਰੇਤੇ ਦੀ ਮੁੱਠ,ਉੱਦਮ ਅੱਗੇ ਲੱਛਮੀ ਪੱਖੇ ਅੱਗੇ ਪੌਣ ,ਉਹ ਦਿਨ ਡੁੱਬਾ ਜਦੋਂ ਘੋੜੀ ਚੜ੍ਹਿਆ ਕੁੱਬਾ ,ਉੱਚੀ ਦੁਕਾਨ ਫਿੱਕਾ ਪਕਵਾਨ ,ਉਲਟੀ ਵਾੜ ਖੇਤ ਨੂੰ ਖਾਏ ,ਉੱਚਾ ਲੰਮਾ ਗੱਭਰੂ ਪੱਲੇ ਠੀਕਰੀਆਂ **,ਅਸ਼ਰਫ਼ੀਆਂ ਦੀ ਲੁੱਟ ਤੇ ਕੋਲਿਆਂ ਤੇ ਮੁਹਰਾਂ, ਅੱਗੇ ਸੱਪ ਪਿੱਛੇ ਸ਼ੀਂਹ, ਆਦਰ ਤੇਰੀ ਚਾਦਰ ਨੂੰ ਬਹਿਣਾ ਤੇਰੇ ਗਹਿਣੇ ਨੂੰ, ਆਪੇ ਫਾਥੜੀਏ ਤੈਨੂੰ ਕੌਣ ਛੁਡਾਏ, ਆਪਣੇ ਹੱਥੀਂ ਆਪਣਾ ਆਪੇ ਹੀ ਕਾਜ ਸਵਾਰੀਐ, ਆਰੀ ਨੂੰ ਇੱਕ ਪਾਸੇ ਦੰਦੇ ਜਹਾਨ ਨੂੰ ਦੋਹੀਂ ਪਾਸੀਂ,**ਅੱਖੀਂ ਵੇਖ ਕੇ ਮੱਖੀ ਨਹੀਂ ਨਿਗਲੀ ਜਾਂਦੀ ,ਅੰਦਰ ਹੋਵੇ ਸੱਚ ਤਾਂ ਕੋਠੇ ਚੜ੍ਹ ਕੇ ਨੱਚ ,ਆਪੇ ਮੈਂ ਰੱਜੀ ਪੁੱਜੀ ਆਪੇ ਮੇਰੇ ਬੱਚੇ ਜਿਉਣ ,ਆਪ ਕੁਚੱਜੀ ਵਿਹੜੇ ਨੂੰ ਦੋਸ਼ ,ਅੰਨ੍ਹਾ ਵੰਡੇ ਰਿਉੜੀਆਂ ਮੁੜ ਮੁੜ ਆਪਣਿਆਂ ਨੂੰ ,ਅਕਲ ਵੱਡੀ ਕੇ ਮੱਝ ,ਅੰਨ੍ਹਿਆਂ ਵਿੱਚ ਕਾਣਾ ਰਾਜਾ ,ਆਪਣੀ ਪੀੜ੍ਹੀ ਹੇਠ ਸੋਟਾ ਫੇਰਨਾ ,ਇਕ ਅਨਾਰ ਸੌ ਬਿਮਾਰ ,ਇਕ ਹੱਥ ਨਾਲ ਤਾੜੀ ਨਹੀਂ ਵੱਜਦੀ ,ਇੱਕ ਚੁੱਪ ਸੌ ਸੁੱਖ ਝੱਟ ਮੰਗਣੀ ਪੱਟ ਵਿਆਹ ,ਸਹਿਜ ਪੱਕੇ ਸੋ ਮੀਠਾ ਹੋਵੇ ,ਦਾਲ ਵਿੱਚ ਕਾਲਾ ਹੋਣਾ **,ਸੰਗ ਤਾਰੇ ਕੁਸੰਗ ਡੋਬ,**ਸੱਦੀ ਨਾ ਬੁਲਾਈ ਮੈਂ ਲਾੜੇ ਦੀ ਤਾਈਂ ,ਸਵੈ ਭਰੋਸਾ ਵੱਡਾ ਤੋਸਾ,ਸੌ ਦਿਨ ਚੋਰ ਦੇ ਇਕ ਦਿਨ ਸਾਧ ਦਾ ,ਸੱਪ ਦਾ ਬੱਚਾ ਸਪੋਲੀਆ ,ਸੱਪ ਮਰ ਜਾਵੇ ਲਾਠੀ ਵੀ ਨਾ ਟੁੱਟੇ ,ਸਾਈਆਂ ਕਿਤੇ ਵਧਾਈਆਂ ਕਿਤੇ ,ਹੰਕਾਰਿਆ ਸੋ ਮਾਰਿਆ **,ਹੱਥ ਨੂੰ ਹੱਥ ਧੋਂਦਾ ਹੈ,** ਹਾਥੀ ਲੰਘ ਗਿਆ ਪੂਛ ਰਹਿ ਗਈ, **ਕੋਹ ਨਾ ਚੱਲੀ ਬਾਬਾ ਤਿਹਾਈ** ,ਕੁੱਛੜ ਕੁੜੀ ਸ਼ਹਿਰ ਢੰਡੋਰਾ ,ਕੋ ਲਿਆਂਦੀ ਦਲਾਲੀ ਵਿੱਚ ਮੂੰਹ ਕਾਲਾ ,ਕਰੇ ਕੋਈ ਭਰੇ ਕੋਈ **,ਖਿੱਦੋ ਫ਼ਰੋਲਿਆਂ ਲੀਰਾਂ ਹੀ ਨਿਕਲਦੀਆਂ ਹਨ,** ਖ਼ਵਾਜੇ ਦਾ ਗਵਾਹ ਡੱਡੂ ,ਖੇਤੀ ਖਸਮਾਂ ਸੇਤੀ **,ਖਰਬੂਜ਼ੇ ਨੂੰ ਦੇਖ ਕੇ ਖਰਬੂਜ਼ਾ ਰੰਗ ਬਦਲਦਾ ਹੈ,**ਖੂਹ ਪੁੱਟਦੇ ਨੂੰ ਖਾਤਾ ਤਿਆਰ **,ਘੜੇ ਨੂੰ ਹੱਥ ਲਾਇਆ ਸਾਰਾ ਟੱਬਰ ਤਿਹਾਇਆ,**ਘਰਦਾ ਭੇਤੀ ਲੰਕਾ ਢਾਹੇ ,ਘਰਦੀ ਕੁੱਕੜੀ ਦਾਲ ਬਰਾਬਰ ,ਚਿੰਤਾ ਚਿਖਾ ਬਰਾਬਰ , ਛੱਜ ਤਾਂ ਬੋਲੇ ਛਾਣਨੀ ਵੀ ਬੋਲੇ,ਛੋਟੀ ਮੂੰਹ ਵੱਡੀ ਗੱਲ , **ਜੋ ਰਾਤੀ ਜਾਗਣ ਕਾਲੀਆਂ ਸੋ ਹੀ ਖਾਣ ਸੁਖਾਲੀਆਂ,**ਜਾਂ ਦੇ ਚੋਰ ਦੀ ਲੰਗੋਟੀ ਹੀ ਸਹੀ ,ਜਿਸਦੀ ਕੋਠੀ ਦਾਣੇ ਉਹਦੇ ਕਮਲੇ ਵੀ ਸਿਆਣੇ ,ਜਿਹੜੇ ਗੱਜਦੇ ਨੇ ਉਹ ਵਰ੍ਹਦੇ ਨਹੀਂ , ਝੱਟ ਮੰਗਣੀ ਪੱਟ ਵਿਆਹ **,ਨਵਾਂ ਨੌ ਦਿਨ ਪੁਰਾਣਾ ਸੌ ਦਿਨ, ਪਾਣੀ ਵਿੱਚ ਸੋਟਾ ਮਾਰਿਆਂ ਪਾਣੀ ਦੋ ਨਹੀਂ ਹੋ ਜਾਂਦੇ, ਵਿੱਦਿਆ ਵਿਚਾਰੀ ਤਾਂ ਪਰਉੱਪਕਾਰੀ, ਵੇਲੇ ਦੀ ਨਮਾਜ਼ ਕੁਵੇਲੇ ਦੀਆਂ ਟੱਕਰਾਂ, ਇਕ ਦਰ ਬੰਦ ਸੌ ਦਰ ਖੁੱਲ੍ਹਾ, ਬਿੱਲੀ ਦੇ ਸਿਰ੍ਹਾਣੇ ਦੁੱਧ ਨਹੀਂ ਜੰਮਦਾ,**ਰੱਸੀ ਸੜ ਗਈ ਵੱਟ ਨ੍ਹੀਂ ਗਿਆ

ਮੁਹਾਵਰੇ

ਉਸਤਾਦੀ ਕਰਨੀ, ਉਂਗਲ ਕਰਨੀ, ਉੱਲੂ ਬਣਾਉਣਾ ,ਉੱਚਾ ਸਾਹ ਨਾ ਕੱਢਣਾ, ਉੱਡਦੇ ਫਿਰਨਾ ,ਉੱਘ ਸੁੱਘ ਮਿਲਣੀ,ਅੱਖਾਂ ਵਿਚ ਰੜਕਣਾ **,ਉਂਗਲਾਂ ਤੇ ਨਚਾਉਣਾ, ਉਧੜ-ਧੁੰਮੀ ਮਚਾਉਣਾ, ਊਠ ਦੇ ਮੂੰਹ ਵਿੱਚ ਜ਼ੀਰਾ ਦੇਣਾ,**ਅੱਗ ਲਾਉਣਾ ,ਆਵਾ ਊਤ ਜਾਣਾ ,ਅਸਮਾਨ ਨੂੰ ਟਾਕੀਆਂ ਲਾਉਣਾ, ਅੱਖਾਂ ਵਿੱਚ ਲਾਲੀ ਉਤਰਨੀ ,ਅਕਲ ਤੇ ਪਰਦਾ ਪੈਣਾ, **ਅੱਖਾਂ ਅੱਗੇ ਖੋਪੇ ਚਾੜ ਦੇਣੇ, ਅੱਖਾਂ ਉੱਤੇ ਬਿਠਾਉਣਾ, ਅੱਲੇ ਫੱਟਾਂ ਤੇ ਲੂਣ ਛਿੜਕਣਾ, ਆਪਣੇ ਅੱਗੇ ਕੰਡੇ ਬੀਜਣਾ, ਆਪਣੇ ਤਰਕਸ਼ ਵਿੱਚ ਤੀਰ ਹੋਣਾ, ਸਿਰ ਚੜ੍ਹਨਾ,**ਈਨ ਮੰਨਣੀ, ਈਦ ਦਾ ਚੰਨ ਹੋਣਾ, ਇੱਟ ਨਾਲ ਇੱਟ ਖੜਕਾਉਣਾ,ਸਿਰ ਫਿਰਨਾ, ਸਿਰ ਤੇ ਚੜ੍ਹਨਾ ,ਸਬਰ ਦਾ ਘੁੱਟ ਭਰਨਾ, ਸਿਰ ਪੈਰਨਾਹੋਣਾ, **ਸਿਰ ਖੁਰਕਣ ਦੀ ਵੇਹਲ ਨਾ ਹੋਣਾ,ਸੱਠੀ ਦੇ ਚੌਲ ਖੁਆਣੇ,**ਹੱਥਧੋਕੇਪਿੱਛੇਪੈਣਾ, ਹੱਥੀਂਛਾਂਵਾਂਕਰਨੀਆਂ, ਹੱਡਭੰਨਣੇ, ਹੱਥਤੰਗਹੋਣਾ ,ਹੱਥਮਲਣਾ,ਹੱਥਪੈਰਮਾਰਨਾ, **ਹੱਥ ਉੱਤੇ ਹੱਥ ਧਰ ਕੇ ਬੈਠਣਾ, ਹੱਥਵਟਾਉਣਾ, ਹਵਾ ਦੇ ਘੋੜੇ ਸਵਾਰਹੋਣਾ,**ਕੰਨੀਂਕਤਰਾਉਣਾ, ਕੰਨਤੇਜੂੰਨਾਸਰਕਣਾ, ਕੰਨਘੇਸਲਮਾਰਨੀ, **ਕਣਕਨਾਲ ਘੁਣ ਵੀਪਿਸਣਾ, ਕੱਖਭੰਨ ਕੇ ਦੂਹਰਾਂ ਨਾ ਕਰਨਾ, ਕਲਮ ਦੇ ਧਨੀਹੋਣਾ, ਕਿਤਾਬੀਕੀੜਾਹੋਣਾ,** ਖ਼ਾਨਾਖ਼ਰਾਬਹੋਣਾ, ਖਾਨਿਓਜਾਣਾ,**ਖੂਹ ਨਿਖੁੱਟ ਜਾਣਾ,** ਗੁੱਡੀਚੜ੍ਹਨੀ, ਗਲਪੈਣਾ ,ਗੰਗਾਨਹਾਉਣਾ ,ਚੜ੍ਹਮੱਚਣੀ, ਚੰਦਚਾੜ੍ਹਨਾ, ਚਾਦਰਵੇਖਕੇਪੈਰਪਸਾਰਨਾ ,ਚਕਮਾਦੇਣਾ ,ਛੱਕੇਛੜਾਉਣਾ ,ਛਾਪਾਮਾਰਨਾ, ਛਿੱਲਲਾਉਣੀ ,ਛਿੱਕੇਟੰਗਣਾ

Bachelor of Arts / Bachelor of Science(Economics) Semester II
Session 2025-26
APPRECIATING ENGLISH LITERATURE-I
Course Code: BARL/BECL-2212
(NEP-2020)

COURSE OUTCOMES

After passing this course, the students will be able to:

CO 1: change the narration and voice of sentences after understanding fundamental grammatical rules governing them through the study of "English Grammar in Use" by Raymond Murphy

CO 2: to learn to write personal letters and enhance the writing skills

CO 3: comprehend the meaning of texts and answer questions related to situations, episodes, themes and characters depicted in them through the study of the stories in the text "Tales of Life".

CO 4: appreciate the writings of various Indian and foreign story and Short - Story writers and relate them to their socio-cultural milieu through the study of the stories in the text "Tales of Life".

Bachelor of Arts / Bachelor of Science(Economics) Semester II
Session 2025-26
APPRECIATING ENGLISH LITERATURE-I
Course Code: BARL/BECL-2212

Examination Time: 3 Hrs

L-T-P Max.	**Marks: 100**
4-0-0	**Theory: 70**
	CA: 30

Instructions for the Paper Setters:-
Eight questions are to be set, two from each of the four Units (I-IV). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section. Each question will carry 14 marks. (14x5=70)

UNIT-I

English Grammar in Use, 5th Edition by Raymond Murphy, CUP (Units: 49-81)

UNIT-II

Personal letter Writing and English Grammar in Use (Units: 82-97)

UNIT-III

Tales of Life (Guru Nanak Dev University, Amritsar): Stories at Sr. No. 1, 2, 3, 5 and 6

UNIT-IV

Tales of Life (Guru Nanak Dev University, Amritsar): Stories at Sr. No. 7, 9, 10, 11, 12

Texts Prescribed:

1. *English Grammar in Use* (Fifth Edition) by Raymond Murphy, CUP
2. *Tales of Life* (Guru Nanak Dev University, Amritsar)

Bachelor of Science (Economics) Semester –II
Session 2025-26
Course Code: BECL-2175
Economics (Macroeconomics)

Course outcomes:

After passing this course, students will be able to:

CO1: learn the determination of equilibrium in the economy using Classical and Keynesian models and understand the consumption behaviour of an economy.

CO2: understand the investment behaviour of an economy and different theories of the trade cycle.

CO3: understand the nature and functions of money and the role of financial markets and institutions in the economy.

CO4: understand the causes and solution to the problem of inflation and study the macroeconomic policies.

Bachelor of Science (Economics) Semester –II
Session 2025-26
Course Code: BECL-2175
Economics (Macroeconomics)

Time: 3 Hours

L-T-P (Credits):4-0-0
Max. Marks: 100
Theory: 70
CA: 30

Note: Instructions for the Paper–Setter:
Two questions, each carrying 14 marks, from each of the Units I-IV (i.e., a total of eight questions) are to be set. Candidates are required to attempt five questions, selecting at least one from each unit. The fifth question may be attempted from any unit.

UNIT–I

Distinction between Micro and Macro Economics; Say's Law of Market and Aggregate Demand and Aggregate Supply, Determination of Income and Employment: Classical and Keynesian Models.Consumption Functions; average (short-run and long-run) and marginal propensity to consume; Keynes' Psychological Law of Consumption, Multiplier: Meaning and its working.

UNIT–II

Investment: Meaning, Investment Demand Schedules and factors affecting investment decisions. Marginal Efficiency of Capital, Accelerator, Multiplier-Accelerator Interaction.
Trade cycles- Meaning, Characteristics and Phases, Samuelson and Hicks Models of Trade Cycles.

UNIT–III

Money: Its functions and role. Money and Capital Markets (Introductory); Quantity Theory of Money: Fisher's and Cambridge's Equations, Liquidity Preference Theory.
Banking: Meaning and Functions of Commercial and Central Banks, Credit Creation and Credit Control.

UNIT–IV

Inflation: Concept, Causes and Cures. Inflation-unemployment Trade-off (only Phillips' contribution). Macroeconomic Policies: Fiscal Policy – meaning, objectives and instruments. Monetary Policy-meaning, objectives and instruments.

Case Study: Monetary and Fiscal Policy of India

Suggested Readings:

1. Shapiro E. (3013), *Macroeconomic Analysis*, Galgotia Publications.
2. Dwivedi D.N. (3018), *Macroeconomics: Theory and Policy*, Tata McGraw-Hill, New Delhi.

Note: The latest editions of the books are recommended.

Bachelor of Science (Economics) Semester –II

Session 2025-26
Course Code: BECL-2453
Quantitative Techniques–II

Course Outcomes:

After the successful completion of this course, the students will be able to

CO1: Solve linear equations of two variables and its applications in economics, under the quadratic equations, arithmetic progression, geometric progression and their applications in economics.

CO2: Develop understanding of elements of analytical geometry, straight lines, basic concepts of trigonometry and permutations and combinations.

CO3: Differentiate between a constant and a variable, graph of linear and quadratic functions and its applications in economics.

CO4: Recognize derivative of implicit functions, parametric functions, exponential functions, logarithmic functions and how to apply these derivatives in economics theory.

Bachelor of Science (Economics) Semester –II

Session 2025-26
Course Code: BECL-2453
Quantitative Techniques–II

Time: 3 Hours **L-T-P (Credits):4-0-0**
Max. Marks: 100
Theory: 70
CA: 30

Note: Instructions for the Paper–Setters:
Two questions, each carrying 14 marks, from each of Units I-IV (i.e., a total of eight questions) are to be set. Candidates are required to attempt five questions, selecting at least one from each unit. The fifth question may be attempted from any unit.

SECTION–A

Solution of Linear Equations: Solution of Simultaneous Linear Equations (up to two variable case), Application of Linear Equation in Economics; Solution of Quadratic Equations. Series: Arithmetic Progression Series, Geometric Progression Series and their applications in economics.

SECTION–B

Elements of Analytical Geometry: Straight line; Concepts of combination and permutation, Elements of set theory, union, intersection, difference, symmetric difference, complementation, Venn diagrams.

SECTION–C

Difference between a constant and a variable, concept of functions, classifications of functions, graph of linear and quadratic functions (Economic applications).
Limits and continuity of a function. Concept of differentiation (ab-intioprinciple).

SECTION–D

Derivatives (Excluding Trigonometric/ and Inverse Functions): Rules of derivatives; functions of functions rule; derivatives of implicit functions, parametric functions, exponential functions, logarithmic functions (Application in Economics).

Suggested Readings:

1. Monga, G.S.: *Mathematics and Statistics for Economics*
2. Yamane, Taro: *Mathematics for Economists*.
3. Allen, R.G.D.: *Mathematical Analysis for Economists.*
4. Edward T Dowling: *Introduction to Mathematical Economics.*

Note: The latest editions of the books are recommended.

Bachelor of Arts/ Bachelor of Science (Honours)
Semester–II
Session: 2025-26
Course Title: Mathematics (Advanced Calculus)
Course Code: BARL/BECL -2333

Course Outcomes

After passing this course, the students will be able to:

CO 1: Understand real number system, limit of a function, basic properties of limit, continuity, and classification of discontinuities & to apply it in real world problem.

CO 2: To Classify the difference between Hyperbolic and Inverse Hyperbolic functions and understand the concept of Taylor's and Maclaurin theorem with its applications.

CO 3: Demonstrate Asymptotes and De Moivre's theorem (for integer and Rational index) and its applications, primitive nth roots of unity.

CO 4: To understand the concepts of definite integrals and their properties and Reduction Formulae & to apply in a wide variety of disciplines like Bio, Eco, Physics & Engineering.

Bachelor of Arts/ Bachelor of Science (Honours)
Semester–II
Session: 2025-26
Course Title: Mathematics (Advanced Calculus)
Course Code: BARL/BECL -2333

Examination Time: 3 Hours **Max. Marks: 100**

L T P **Theory: 70**

4 0 0 **CA: 30**

Instructions for the Paper Setter: Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

Unit I

Real number system and its order properties: lub, glb of sets of real numbers, Completeness property, Archimedean property, Dense property of Rational numbers, Limit of a function of real variable, Properties of Limits, Squeeze Theorem, Continuous function and classification of discontinuities, Differentiability of a function of real variable, Concavity and Convexity of function, Point of inflexion.

Unit II

Derivatives of Hyperbolic and Inverse Hyperbolic functions, nth order derivatives, Leibnitz theorem on nth derivative and its applications, Taylor's and Maclaurin theorem with Lagrange form of remainder, Application of Taylor's theorem in error estimation; Taylor's series expansions of $Sinx, Cosx, e^{cosx}. logx$ etc. Indeterminate forms and L'Hopital rule.

Unit III

Asymptotes, Horizontal Asymptotes, Vertical Asymptotes, Oblique Asymptotes, Asymptotes of general Rational Algebraic Curve with illustrations, Intersection of curve and its Asymptotes, de Moivre's theorem (for integer and Rational index) and its applications, primitive nth roots of unity.

Unit IV

Integration of hyperbolic functions, Properties of definite integral, Reduction formulae of type

$\tan^n x\, dx, \int \cot^n x\, dx, \int \sec^n x\, dx, \int \operatorname{cosec}^n x\, dx, \int x\cos^n x\, dx, \int \cos^m x \sin nx\, dx$, Reduction formulae of using rule of smaller index +1 of type $\int_0^{\frac{\pi}{2}} \sin^n x \cos^n x\, dx, \int_0^{\frac{\pi}{2}} \cos^n x\, dx,$

$\int_0^{\frac{\pi}{2}} \sin^n x\, dx$

Text Books:-

1. S. Narayan and P.K.Mittal: Integral Calculus.Sultan Chand & Sons.
2. Gorakh Prasad, Differential Calculus (19th ed.). Pothishala Pvt. Ltd. Allahabad,2016.

Reference Books:-

1. Tom M.A postol, Calculus: An Indian Adaptation, Wiley India,2023.
2. MurrayR.Spiegel, Theory and Problems of Advanced Calculus, Schaum' soutlineseries, Schaum Publishing Co.NewYork.

Bachelor of Arts/ Bachelor of Science (Honours)
Semester–II
Session: 2025-26
Course Title: Calculus Laboratory
Course Code: BARP/ BECP -2333

Course Outcomes:

After passing this course, students will be able to:

CO1: Students will demonstrate the ability to conduct a specific experiment from a given list, applying theoretical knowledge and practical skills to accurately complete the procedure and obtain reliable results.

CO2: Students will be able to articulate the theoretical background and principles underlying the chosen experiment.

CO3: Students will demonstrate their understanding of the experiment through oral questioning and discussion.

CO4: Students will maintain a well-organized and accurate practical file documenting all experiments conducted.

Bachelor of Arts/ Bachelor of Science (Honours) Semester–II
Session: 2025-26
Course Title: Calculus Laboratory
Course Code: BARP/ BECP-2333

Examination Time: 3 Hours **Max. Marks: 50**
Practical: 35
L T P **CA: 15**
0 0 1

List of Practicals (using any package)

1. Plotting graphs of elementary functions eax+b sin(bx+c) , log(ax+b), 1/(ax+b), sin(ax+b),cos(ax+b), |ax+b| and to illustrate the effect of a and b on the graphs.
2. Plotting the graphs of the polynomial of degree 4 and 5, the derivative graph, the second derivative graph
3. Tracing of conics in Cartesian coordinates and using the general equation of second degreein x and y.
4. Tracing of conicoids: Ellipsoid, Hyperbolic paraboloid, Elliptic paraboloid, Hyperboloid ofone and two sheets etc.
5. Graphs of hyperbolic functions.
6. Approximation of limit.
7. Approximations of derivatives.

Reference Books:-

1. S.S. Sastry, Engineering Mathematics -Volume I (4^{th} Edition), PHI, 2008.
2. S.S. Sastry, Engineering Mathematics -Volume II (4^{th} Edition), PHI, 2008.

Bachelor of Arts (Honours) / Bachelor of Science (Economics) (Honours) Semester- II
(Session 2025-26)
Course Code: BARM-2134, BECM-2134
COMPUTER SCIENCE
(PROGRAMMING IN C)

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend the working of various programming constructs involved in C Programming.

CO2: Apply various operators and control sequence of program using various control statements.

CO3: Apply programming concepts such as arrays, functions and strings to provide solution in different problem domains.

CO4: Work with pointers, structures and union.

Bachelor of Arts (Honours)/ Bachelor of Science (Economics) (Honours) Semester- II
(Session 2025-26)
Course Code: BARM-2134, BECM-2134
COMPUTER SCIENCE
(PROGRAMMING IN C)
(Theory)

Examination Time: 3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical: 30**
Credits: 4 **CA: 30**

Instructions for Paper Setter -
Eight questions of equal marks (08 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT–I

Data Representation, Introduction to Number Systems and Character Set, Decision tables, Decision Trees, Flow Charts, pseudo codes and, algorithms.
Programming Using C: Introduction to C, Applications and Advantages of C, Tokens, Types of Errors Data Types: Basic & Derived Data Types, User Defined Data Types, Declaring and initializing variables.

UNIT–II

Operators and Expressions: Types of operators (Unary, Binary, Ternary), Precedence and Associativity.
Data I/O Functions: Types of I/O function, Formatted & Unformatted console I/O Functions.
Control Statements: Jumping, Branching and Looping–Entry controlled and exit controlled, difference between for, while and do–while.

UNIT–III

Arrays: Types of Arrays, One Dimensional and Two-Dimensional Arrays.
Strings: Introduction to Strings and String functions, array of strings.
Functions: User Defined & Library Function, Function (Prototype, Declaration, Definition), Methods of passing arguments, local and global functions, Recursion.

UNIT-IV

Storage Classes: Introduction to various storage classes, scope and lifetime of a variable, advantages and disadvantages.
Pointers: Introduction, Uses of pointers, Limitations of pointers, Difference between void pointer and Null pointer, Pointer arithmetic, operators not allowed on pointers, Types of Pointer, Passing Pointers to function, concept of pointer to pointer.
Structure and Union: Introduction to structure and union, pointers with structure.
References:

1. E. Balagurusamy, Programming in ANSI C, Tata McGraw-Hill (2002), 5th edition.
2. Stephen G. Kochan, Programming in C, Pearson Education (2015), 4th edition.
3. Rachhpal Singh K.S. Kahlon, Gurvinder Singh, Programming in C, Kalyani Publishers (2011).
4. YashwantKanetkar, Let us C, BPB Publications (2020), 17th edition.
5. R.S. Salari, Application Programming in C, Khanna Book Publishing (2012), 4th edition.
6. Anshuman Sharma, Learn programming in C, Lakhanpal Publishers (2016), 7th edition.

Bachelor of Arts (Honours) / Bachelor of Science (Computer Science) (Honours)/ Bachelor of Science (Economics) (Honours) Semester- II
(Session 2025-26)
Course Code: BARM-2134, BECM-2134
COMPUTER SCIENCE
(PROGRAMMING IN C)
(PRACTICAL)

Examination Time: 3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical: 30**
Credits: 4 **CA: 30**

Lab based on Programming in C.

Bachelor of Arts / Bachelor of Science (Economicsi) Semester II
(Session 2025-26)
COURSE CODE: BARM-2124, BECM-2124
COMPUTER APPLICATIONS (VOCATIONAL)
(INTRODUCTION TO PROGRAMMING USING PYTHON)

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend the working of various programming constructs involved in Python Programming.

CO2: Apply various operators and control sequence of program using various control statements.

CO3: Apply programming concepts such as list, tuples, dictionaries, functions and strings to provide solution in different problem domains.

CO4: Perform debugging and exception handling.

Bachelor of Arts / Bachelor of Science(Economics) Semester II Session 2025-26

COURSE CODE: BARM-2124, BECM-2124

COMPUTER APPLICATIONS (VOCATIONAL)

(INTRODUCTION TO PROGRAMMING USING PYTHON)

Examination Time: 3 Hrs. **Max. Marks: 100**

Theory: 40

L-T-P: 3-0-1 **Practical: 30**

Credits: 4 **CA: 30**

Instructions for Paper Setter -

Eight questions of equal marks (08 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT I

Problem Solving, Problem Analysis, Concept of writing an algorithm, drawing a flowchart, developing a program.

Introduction to Python: Python's features, Story behind the name, Python versions, Execution environments: the Python Interpreter and IDEs (e.g. PyCharm or VSCode), Getting and Setting up Python.

Python program structure: Writing your first "Hello World" program; creating, saving and executing a program; comments, Indentation.

UNIT II

Data and Expressions: Literal Constants, numbers, strings – immutable strings, quotes, the escape sequence, the format methods. Variables and Identifiers, data-types, object,

Operators & Expressions: shortcuts, evaluation order, Boolean Expressions (Conditions), Logical Operators. User Input/output.

Control Flow: Selection Control, Nested conditions, Loops, break and Continue Statements, Data Structures: list, tuple, dictionary and set; basic operations e.g. creating, indexing, slicing, membership

UNIT III

Functions: defining and calling functions, passing and returning values, local and global variables, recursive functions, Iteration vs. Recursion.

Modules: purpose and usage, the import statement, from – import statement, the __main__ attribute, creating a module and importing, the dir() function.

Handling Exceptions: try..catch and with statements, errors, debugging.

UNIT IV

Files and Strings: Opening Files, Using Text Files, Reading files, Writing files, Understanding read functions, Understanding write functions.

Introduction to numpy and pandas for data processing.

References:

1. Yashavant Kanetkar, Aditya Kanetkar, Let Us Python-6th Edition, BPB Publications.
2. Charles Dierbach, Introduction to Computer Science Using Python: A Computational Problem-Solving Focus, Wiley Publications.
3. Martin C. Brown, Python: The Complete Reference, Indian Edition, McGraw Hill Education (India) Private Limited
4. Mark J. Guzdial, Introduction to Computing and Programming in Python, Pearson Education.

Note: The latest editions of the books should be followed.

Bachelor of Arts / Bachelor of Science(Economics) Semester II
Session 2025-26
COURSE CODE: BARM-2124, BECM-2124

COMPUTER APPLICATIONS (VOCATIONAL)
(INTRODUCTION TO PROGRAMMING USING PYTHON) (PRACTICAL)

Examination Time: 3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical: 30**
Credits: 4 **CA: 30**

Instructions for the examiners: - Two questions of equal marks strictly as per the syllabus and based on the practical exercises covered in the semester. Questions may be subdivided into parts (not exceeding four). Candidates will attempt ONE question, explain their answer by writing on the answer sheet, and then implement the same on the computer. Examiner will evaluate both the answers (theory as well as practical). The viva should also be conducted alongside, and the student is asked viva questions related to the question and the solution he/she is working on during the exam.

Programming exercises based on:

- Use the Python interactive interpreter
- Getting familiar with a Python IDE
- Python fundamentals, data types, operators
- Operators, flow control using if, else and elif, While statement, loops using For, Loop Patterns
- Implementation of different collections like list, tuple and dictionary and their various functions
- Demonstrating creation of functions, passing parameters and return values
- Working with modules
- Handling Exceptions
- Implementation of reading, writing and organizing files
- Basic numpy and pandas functions

Skill Enhancement Course
Bachelor of Science (Honours) Economics Semester –II
Session 2025-26
Course Code: BECM-2450
Course Title: Statistical Analysis Using Spreadsheet

Time: 1+1 Hours | Max. Marks: 100
Credit 1-0-2 | Theory: 30
Practical:40
CA: 30

THEORY

L T P : 1 0 0 | **Theory: 30**

Instructions for Paper Setters:
Eight questions of equal marks (6 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions.

Unit-I

Introduction to statistics, functions of statistics, collection of data, presentation of data, tabulation of data, charting of data, introduction to excel, graphs in excel, measures of central tendency-, mean, median - meaning and computation, mode- meaning and computation, weighted average mean, geometric mean and harmonic mean.

Unit-II

Measures of dispersion, types of dispersion- range, quartile deviation, mean deviation, standard deviation, co-efficient of variation. Skewness- Karl Pearson co-efficient of skewness, Bowley's co-efficient of skewness and Kurtosis.

Unit-III

Correlation, Types of correlation, positive, negative, linear. methods of correlations – Karl Pearson's Co-efficient of correlation, rank correlation coefficient.

Unit-IV

Regression analysis- Linear Regression, regression Y on X, regression X on Y, Regression Coefficient, Relations between regression coefficients and correlation coefficients, Difference between regression and Correlation, Calculation of these using MS excel.

Reference Books:-

1. SC Gupta, Fundamentals of Mathematical Statistics, Himalaya Publication.
2. Data Analysis with Microsoft Excel by K. Berk, Partrick Carey.

Skill Enhancement Course

Bachelor of Arts / Bachelor of Science (Honours) Four Year Degree Program
Semester II
Course Title: Statistical Analysis Using Spreadsheet
Course Code: BECM-2450
Time:1 hour **Practical: 40**
Credit 0-0-2

Unit-I

Types of data analysis with EXCEL, Creation of Spread sheets – Insertion of rows and columns, drag and fill cells

Unit-II

Working with Data- Importing, cleaning , sorting and filtering of data.
Quick analysis with data tables, charts and graphs

Unit-III

Analysis with simple statistical functions- Average , geometric mean, median, standard deviation , range, correlation and regression

Unit-IV

Creating Reports using tables, charts and statistical functions

Bachelor of Arts / Bachelor of Science(Economics) Semester III
Session 2025-26
PUNJABI (COMPULSORY)
COURSE CODE- BARL/BECL-3421

COURSE OUTCOMES

CO1:‘ਚੋਣਵੇਪੰਜਾਬੀਨਿਬੰਧ’ਨੂੰ ਪੜ੍ਹਾਉਣ ਦਾਮਨੋਰਥਵਿਦਿਆਰਥੀਆਂਅੰਦਰਵਾਰਤਕਪ੍ਰਤੀਦਿਲਚਸਪੀ, ਸੂਝ ਨੂੰ ਪੈਦਾਕਰਨਾ ਹੈ।

CO2: ‘ਆਧੁਨਿਕਇਕਾਂਗੀ’ ਇਕਾਂਗੀ ਸੰਗ੍ਰਹਿਨੂੰ ਸਿਲੇਬਸ ਵਿਚਸ਼ਾਮਿਲਕਰ ਕੇ ਵਿਦਿਆਰਥੀਆਂਅੰਦਰਇਕਾਂਗੀਪੜ੍ਹਣ ਦੀ ਰੁਚੀ ਨੂੰ ਪੈਦਾਕਰਨਾ ਹੈ ਅਤੇ ਇਸ ਸਾਹਿਤ ਰੂਪ ਨਾਲਜੋੜਣਾ ਹੈ।

CO3:ਸੰਖੇਪ ਰਚਨਾਕਰਨਨਾਲਵਿਦਿਆਰਥੀਆਪਣੀਗੱਲ ਨੂੰ ਸੰਖੇਪ ਵਿਚਕਹਿਣ ਦੀ ਜਾਚਸਿੱਖਣਗੇ ਅਤੇ ਇਹਦਿਮਾਗੀਕਸਰਤਵਿਚ ਸਹਾਈਹੋਵੇਗੀ।ਦਿੱਤੇ ਪੈਰ੍ਹੇ ਵਿਚੋਂਅਸ਼ੁੱਧ ਸ਼ਬਦਜੋੜਾਂ ਨੂੰਸ਼ੁੱਧ ਕਰਨਦਾਮਨੋਰਥਵਿਦਿਆਰਥੀਆਂ ਦੀ ਬੁੱਧੀ ਨੂੰ ਤੀਖਣਕਰਦਿਆਂ ਉਨਾਂ ਦੀ ਲਿਖਣਪ੍ਰਤਿਭਾ ਨੂੰ ਉਜਾਗਰਕਰਨਾ ਹੈ।

CO4:ਮੂਲ ਵਿਆਕਰਣਕਇਕਾਈਆਂ : ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਵੰਨਗੀਆਂ (ਭਾਵੰਸ਼, ਸ਼ਬਦ, ਵਾਕੰਸ਼, ਉਪਵਾਕ ਅਤੇ ਵਾਕ)ਨੂੰ ਪੜ੍ਹਾਉਣ ਦਾਮਨੋਰਥਵਿਦਿਆਰਥੀਆਂਅੰਦਰਭਾਸ਼ਾ ਦੀ ਅਮੀਰੀ ਅਤੇ ਬਾਰੀਕੀਆਂਨੂੰ ਸਮਝਣਲਈਵੱਖਰੇ -ਵੱਖਰੇ ਸਿਧਾਂਤਾਂਦਾਵਿਕਾਸ ਕਰਨਾ ਹੈ।

Bachelor of Arts / Bachelor of Science(Economics) Semester III
Session 2025-26
PUNJABI (COMPULSORY)
COURSE CODE- BARL/BECL-3421

ਸਮਾਂ : 3 ਘੰਟੇ **Maximum Marks: 100**

L-T-P **Theory : 70**
4-0-0 **CA :30**

ਅੰਕਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕਲਈਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨਪੱਤਰ ਦੇ ਚਾਰ (A-D) ਸੈਕਸ਼ਨਹੋਣਗੇ।ਸੈਕਸ਼ਨA-D ਤੱਕ ਦੇ ਪ੍ਰਸ਼ਨਕ੍ਰਮਵਾਰ ਯੂਨਿਟI-IV ਵਿਚੋਂਪੁੱਛੇ ਜਾਣਗੇ। ਹਰ ਯੂਨਿਟਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜਪ੍ਰਸ਼ਨਕਰਨੇ ਹਨ। ਹਰ ਸੈਕਸ਼ਨਵਿਚੋਂਇਕਪ੍ਰਸ਼ਨਕਰਨਾਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂਪ੍ਰਸ਼ਨਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨਵਿਚੋਂਕੀਤਾਜਾ ਸਕਦਾ ਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 14ਅੰਕਹਨ।
4. ਪੇਪਰ ਸੈੱਟ ਕਰਨਵਾਲਾਜੇਕਰਚਾਹੇ ਤਾਂਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡਅੱਗੋਂਵੱਧਤੋਂਵੱਧਚਾਰ ਉਪ ਪ੍ਰਸ਼ਨਾਂਵਿਚਕਰ ਸਕਦਾ ਹੈ।

ਪਾਠਕ੍ਰਮ ਅਤੇ ਪਾਠ ਪੁਸਤਕਾਂ

ਯੂਨਿਟ-I

ਚੋਣਵੇ ਪੰਜਾਬੀਨਿਬੰਧ (ਜੋਗਿੰਦਰਸਿੰਘ ਪੁਆਰ,ਪਰਮਜੀਤਸਿੰਘਸਿੱਧੂ), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ।
ਘਰਦਾਪਿਆਰ, ਉਮਰ ਲੰਮੀ ਹੋ ਸਕਦੀ ਹੈ,ਅੱਥਰੂ, ਪੁਰਾਣਾਪੰਜਾਬ, ਇੰਗਲੈਂਡਦਾ ਸੋਗੀ ਸੋਮਵਾਰ,ਖਿਡਾਰੀਆਂ ਦੇ ਵਹਿਮ।
(ਪਾਠਕ੍ਰਮਦਾਹਿੱਸਾਹਨ)
(ਵਿਸ਼ਾਵਸਤੂ/ਸਾਰ/ਕਲਾਪੱਖ)

ਯੂਨਿਟ-II

ਆਧੁਨਿਕਇਕਾਂਗੀ
(ਸੰਪਾ.ਰੌਸ਼ਨਲਾਲਆਹੂਜਾ, ਮਨਜੀਤਪਾਲਕੌਰ)
ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
ਵਿਬਾਵਸਤੂ/ਪਾਤਰਚਿਤਰਨ/ਰੰਗਮੰਚੀਪੱਖ/ ਸਾਰ

ਯੂਨਿਟ-III

(ੳ) ਸੰਖੇਪ ਰਚਨਾ (ਪ੍ਰੈਸੀ)
(ਅ) ਦਿੱਤੇ ਪੈਰ੍ਹੇ ਵਿਚੋਂਅਸ਼ੁੱਧ ਸ਼ਬਦਜੋੜਾਂ ਨੂੰਸ਼ੁੱਧ ਕਰਨਾ

ਯੂਨਿਟ-IV

ਮੂਲ ਵਿਆਕਰਣਕਇਕਾਈਆਂ : ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਵੰਨਗੀਆਂ (ਭਾਵੰਸ਼, ਸ਼ਬਦ, ਵਾਕੰਸ਼, ਉਪਵਾਕ ਅਤੇ ਵਾਕ)

Bachelor of Arts / Bachelor of Science(Economics) Semester III
Session 2025-26
ENGLISH LANGUAGE SKILLS-II
Course Code: BARL/ BECL -3212
(NEP-2020)

COURSE OUTCOMES

After passing this course, the students will be able to:

CO 1: understand fundamental grammatical rules governing tenses, the use of modal verbs and make correct usage in their language through the study of "English Grammar in Use" by Raymond Murphy

CO 2: to develop the art of creative expression by writing a paragraph on any given topic

CO 3: comprehend the meaning of texts and answer questions related to situations, episodes, and characters depicted in them through the study of the essays in the text "Prose for Young Learners"

CO 4: appreciate the writings of various Indian and foreign story and prose writers and relate them to their socio-cultural milieu through the study of the essays in the text "Prose for Young Learners"

Bachelor of Arts / Bachelor of Science(Economics) Semester III
Session 2025-26
ENGLISH LANGUAGE SKILLS-II
Course Code: BARL/BECL-3212
(NEP-2020)

Max. Marks: 100

Examination Time: 3 Hrs. **Theory: 70**

L-T-P (Credits): 4-0-0 **CA: 30**

Instructions for the Paper Setters:-

Eight questions are to be set, two from each of the four Units (I-IV). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section. Each question will carry 14 marks. (14x5=70)

UNIT-I

English Grammar in Use, 5th Edition by Raymond Murphy, CUP (Units: 98-130)

UNIT-II

Essay Writing and English Grammar in Use (Units: 131-145)

UNIT-III

Making Connections by Kenneth J. Pakenham, 3rd Edn. CUP: Unit-I (Global Health) and Unit II (Multicultural Societies)

UNIT-IV

Making Connections by Kenneth J. Pakenham, 3rd Edn. CUP: Section III (Aspects of Language) and Section IV (Sustaining Planet Earth)

Texts Prescribed:

1.English Grammar in Use (Fifth Edition) by Raymond Murphy, CUP
2.Making Connections by Kenneth J. Pakenham, 3rd Edn. CUP

Bachelor of Science (Economics) Semester –III
Session 2025-26
Course Code: BECL-3175
Economics (Indian Economy)

Course Outcomes:

After passing this course, students will be able to:

CO1: understand the nature, importance and problems of Indian agriculture and new agriculture strategy and WTO agreements related to Indian agriculture.

CO2: Critically understand the industrial development in India, the role of the public and private sectors, the cottage and small industries, and the latest industrial policy.

CO3: understand the composition, direction, and volume of international trade along with the balance of payment problems and the role of foreign capital MNCs.

CO4: understand major economic problems of the Indian economy, Indian Taxation System, and Indian economic planning – its objectives, strategy and evaluation.

Bachelor of Science (Economics) Semester –III
Session 2025-26
Course Code: BECL-3175
Economics (Indian Economy)

Time: 3 Hours

L-T-P (Credits):4-0-0
Max. Marks: 100
Theory: 70
CA: 30

Note: Instructions for the Paper–Setter:

Two questions, each carrying 14 marks, from each of the Units I-IV (i.e., a total of eight questions) are to be set. Candidates are required to attempt five questions, selecting at least one from each unit. The fifth question may be attempted from any unit.

UNIT- I

Nature of Indian Economy; Agriculture in India: Nature and Importance of Agriculture, Causes of Decline in Productivity, Sustainable Agricultural Growth, Green Revolution and New Agricultural Strategy, WTO and Indian Agriculture (Introductory).

UNIT- II

Industry: Performance and Problems of Industrial Development; Public Sector versus Private Sector, Role of Privatization, Role of Small and Cottage Industries, Latest Industrial Policy.

UNIT- III

Foreign Trade: Direction and Composition of Exports and Imports since 1991; Recent Foreign Trade Policy, Balance of Payment Problem, Foreign Capital and Multinational Corporations in India Economic Reforms and its implications.

. UNIT- IV

Features of Population Growth in India, Major Problems of the Economy – Inflation, Unemployment, Poverty and Inequality, Current Indian Tax Structure. Planning- Objectives, Strategy, Evaluation of Planning in India; A Brief Idea of Objectives, Targets, Resources of the Latest Five Year Plan (Twelfth Five Year Plan).

Case Study: Population dynamics and nature of the unemployment problem in Punjab

Suggested Readings:

1. Mishra, S.K. and Puri, V.K. (3019), *Indian Economy*, Himalaya Publication House, Mumbai.
2. Dutt, R. and Sundharam, *K.P.M.* (3018), *Indian Economy,* S. Chand & Co. Ltd., New Delhi.
3. Aggarwal, A. N. (1975), *Indian Economy*, Vikas Publishing House, Delhi.
4. Wadhwa, C. D. (1970), *Indian Economic Policy*, Tata McGraw Hill, Bombay.

Note: The latest editions of the books are recommended.

Bachelor of Science (Economics) Semester –III
Session 2025-26
Course Code: BECL-3453
Quantitative Techniques (Quantitative Techniques–III)

Course outcomes:

After passing this course, students will be able to:

CO1: understand and apply the concept of differentiation in economic applications such as profit maximization, cost minimization or utility optimization.

CO2: understand and apply the concept of indefinite and definite integrals to economic concepts like consumer and producer surplus.

CO3: explain and use matrix operations to solve the system of equations.

CO4: understand the basics of linear programming for the efficient computation of optimal solutions to problems in decision-making.

Bachelor of Science (Economics) Semester –III
Session 2025-26
Course Code: BECL-3453
Quantitative Techniques (Quantitative Techniques–III)

Time: 3 Hours

L-T-P (Credits):4-0-0
Max. Marks: 100
Theory: 70
CA: 30

Note: Instructions for the Paper–Setter:

Two questions, each carrying 14 marks, from each of the Units I-IV (i.e., a total of eight questions) are to be set. Candidates are required to attempt five questions, selecting at least one from each unit. The fifth question may be attempted from any unit.

UNIT–I

Differentiation: Maxima and Minima of Functions, Partial derivatives, higher order partial derivatives.

UNIT–II

Integration (Excluding Trigonometric and Inverse Functions): Indefinite Integrals; Integration by Partial Fractions; Integration by substitution; Integration by parts; Definite Integrals; Application of Integration in Consumer Surplus and Producer Surplus.

UNIT–III

Matrices: Definition, Types, Addition, Subtraction, and Multiplication of Matrices; Scaler Multiplication; Transposition; Determinants and their Properties; Minors and Co-factors; Rank of a Matrix; Inverse of a Matrix; Crammer's Rule for Solution of Simultaneous system of equations; Applications of matrices in economics.

UNIT–IV

Linear Programming: Formulation of problem, Assumptions, Graphical solution, Simplex method, Use of Artificial Variables, Dual Simplex method. Input-Output Analysis: Basic concepts, Input-Output tables for closed and open economies, Leontief Basic Input-Output Model, Simple Applications of Input-Output Analysis.

Suggested Readings:

1. Rangi, S.S. and Chowdhary, V. (2013), *Mathematical Techniques*, S. Vikas s& Co. Publishing House, India.
2. Allen, R.G.D.(1938), Mathematical Analysis for Economists, ELBS and Macmillan Press, New York.
3. Chiang, A.(1967), Fundamental Methods of Mathematical Economics, McGraw Hill.

Note: The latest editions of the books are recommended.

Bachelor of Arts/ Bachelor of Science (Honours) Semester–III
Session: 2025-26
Course Title: Mathematics (Differential Equations)
Course Code: BARL/ BECL-3333
Course Outcomes

After the successful completion of this course, students will be able to:

CO1: Identify differential equation, its order and degree, exact differential equations and special rules to find integrating factors.

CO2: Demonstrate the concept of linear differential equations with constant coefficients, complete solution of the differential equations, orthogonal trajectories of Cartesian and polar curves.

CO 3: Demonstrate the concept of linear differential equations with variable coefficients and its solution.

CO 4: Analyze System of ordinary simultaneous equations, Power Series, convergence of power series, Radius of convergence.

Bachelor of Arts/ Bachelor of Science (Honours)
Semester–III
Session: 2025-26
Course Title: Mathematics (Differential Equations)
Course Code: BARL/ BECL -3333

Examination Time: 3 Hours **Max. Marks: 100**
L T P **Theory: 70**
4 0 0 **CA: 30**

Instructions for the Paper Setter: Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

Unit I

Differential equation of first order and first degree, Linear differential equation reducible to Linear Bernoulli's equation, Ordinary differential equation of first order. Exact differential equations. Necessary and sufficient conditions for Mdx + Ndy to be Exact, integrating factors by inspections, special rules to find integrating factors with proof.

Unit II

Geometrical meaning of a complete solution of the differential equations, General solution of homogeneous equation of second order, Orthogonal trajectories of cartesian and polar curve, Homogeneous differential equations, Linear differential equations with constant coefficients.

Unit III

Singular solution, p-discriminant, c- discriminant, illustrations of singular solutions Variation of Parameters method, Reduction of order. Linear differential equations with variable coefficients, Define Cauchy's linear equations, Legendre's Linear equation.

Unit IV

First order and higher degree equations, equations solvable for y, x, p, equations not containing x, equations not containing y, Clairaut's equation and equations reducible to Clairaut's form.

System of ordinary simultaneous equations, Power Series, convergence of power series, Radius of convergence, Power Series solution about an ordinary point, solutions about singular points, Frobenius method when roots of indicial equations differ by non-integers, and when roots are equal.

Text Book:-

M.D. Raisinghania, Ordinary and Partial Differential Equations, S. Chand, (20th edition)

Reference Book:-

Tom M. Apostol: Calculus: An Indian Adaptation, Wiley India, 2022

Bachelor of Arts/ Bachelor of Science (Honours)
Semester–III
Session: 2025-26
Course Title: Differential Equations Laboratory
Course Code: BARP/ BECP -3333

Examination Time: 3 Hours **Max. Marks: 50**
Practical: 35
L T P **CA: 15**
0 0 1

List of Practicals (using any package)

1. Plotting solution of first order differential equation.
2. Solve the first-order differential equation $\frac{dy}{dx}$ = ay, numerically using Runge-Kutta method.
3. Solve the second-order differential equation $\frac{d^2y}{dt^2}$ = ay, numerically using Runge-Kutta method.
4. Plotting of solution of family of second order differential equation.
5. Solution of system of ordinary differential equations, numerically using Runge-Kuttamethod.
6. Numerical solution of the nonlinear simple pendulum equation.

Text Books:-

1. S.S. Sastry, Engineering Mathematics - Volume I (4th Edition), PHI, 2008.
2. S.S. Sastry, Engineering Mathematics - Volume II (4th Edition), PHI

Bachelor of Arts (Honours) Bachelor of Science (Economics) (Honours) Semester- III
Session 2025-26
Course Code: BARM-3134, BECM-3134
COMPUTER SCIENCE
(COMPUTER ORIENTED NUMERICAL AND STATISTICAL METHODS)

Course Outcomes:

After passing this course the student will be able to:

CO1: Solve non-linear and linear equations using different methods.

CO2: comprehend interpolation and numerical integration.

CO3: Calculate different means and deviations using statistical techniques.

CO4: Comprehend correlation, curve fitting and regression for finding solutions to various statistical problems.

Bachelor of Arts (Honours) /Bachelor of Science (Economics) (Honours) Semester- III
Session 2025-26
Course Code: BARM-3134, BECM-3134
COMPUTER SCIENCE
(COMPUTER ORIENTED NUMERICAL AND STATISTICAL METHODS)
(THEORY)

Examination Time: 3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical: 30**
Credits: 4 **CA: 30**

Instructions for Paper Setter -
Eight questions of equal marks (8 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section. The students can use Non–programmable/ scientific & Non–storage type calculator.

Unit –I

Introduction: Numerical methods, Numerical methods versus numerical analysis, Errors and Measures of Errors. Bisection method, false position method and Newton Raphson method.
Simultaneous Solution of Equations: Gauss Elimination Method, Gauss Jordan method

Unit -II

Interpolation: Interpolation and Curve Fitting, Newtons Methods: Forward Difference Method, Backward Difference Method and Divided Difference Method.
Numerical Integration: Trapezoidal Rule, Simpson's 1/3 Rule Simpson's 3/8 Rule.

Unit -III

Measure of Central Tendency: Mean Arithmetic, Mean Geometric, Mean Harmonic, Mean, Median and Mode.
Measure of dispersion: Range, Mean deviation, Standard deviation, co-efficient of variation.

Unit –IV

Correlation: Meaning, Karl Pearson method, Rank correlation.
Regression: Meaning, Linear Regression and its coefficients.

References/ Textbooks:

1. B.S. Grewal, Numerical Methods in Engineering & Science: With Programs in C, C++ & MATLAB, Khanna Publisher, 2014.
2. V. Rajaraman, Computer Oriented Numerical Methods, Prentice Hall of India Private Ltd., 2009.

Note: The latest editions of the books should be followed.

Bachelor of Arts (Honours) /Bachelor of Science (Economics) (Honours) Semester- III
Session 2025-26
Course Code: BARM-3134, BECM-3134
COMPUTER SCIENCE
(COMPUTER ORIENTED NUMERICAL AND STATISTICAL METHODS)
PRACTICAL

Examination Time: 3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical: 30**
Credits: 4 **CA: 30**

Lab exercises using a spread sheet tool for:

1. Iterative Solutions
2. Simultaneous Solution of Equations
3. Interpolation
4. Measure of Central Tendency
5. Measure of dispersion
6. Correlation
7. Regression

Bachelor of Arts / Bachelor of Science(Economics) Semester III
Session 2025-26
COURSE CODE: BARM-3124, BECM-3124
COMPUTER APPLICATIONS (VOCATIONAL)
(OPERATING SYSTEM)

Course Outcomes:

After passing this course the student will be able to:

CO1: Describe, contrast and compare different types of Operating System.

CO2: Analyze CPU scheduling and memory management policies.

CO3: Comprehend about deadlock along with its prevention and detection.

CO4: Apply commands to perform various tasks in Linux operating system.

Bachelor of Arts / Bachelor of Science(Economics) Semester III
Session 2025-26
COURSE CODE: BARM-3124, BECM-3124
COMPUTER APPLICATIONS (VOCATIONAL)
(OPERATING SYSTEM)
(THEORY)

Examination Time: 3 +3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical:30**
Credits: 4 **CA: 30**

Instructions for Paper Setter -
Eight questions of equal marks (10 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT–I

Introduction to Operating System, Types of Operating systems: Multiuser, Multitasking and Multiprogramming, Functions of Operating System, Booting a System, Language Processors: Compiler, Assembler, Interpreter, Linker and Loader.

UNIT-II

CPU Scheduling: Basic concepts, Scheduling Algorithms, Evaluation: Turnaround Time, Waiting Time.
Memory Management: Logical address space and physical address space, schemes.
Introduction to File Management, I/O Device Management, Data Management.

UNIT-III

Deadlocks: System Model, Deadlock characterization, Methods for handing deadlocks, Deadlocks Prevention, Deadlock Avoidance, Deadlock Detection, Recovery from Deadlock, Approach to Deadlock handling.

UNIT–IV

Linux: Introduction, Features, Architecture of linux (Kernel, Shell)
Linux Commands: cat, cd, chmod, chown,cp, ls, mkdir, mv, rmdir, rm,mv, sort, ln,df, echo, exit, find, free, whoami, grep ,cal, who, pwd.
Introduction to Vi Editor, **commands:** opening, inserting, modifying, deleting and saving files.

References:

1. AviSilberschatz, Peter Baer Galvin, Greg Gagne, Operating System Concepts, Wiley, 2013.
2. Charles Crowley, Operating Systems: A Design-Oriented Approach, Tata McGraw Hill, 2001.
3. Deitel, An Introduction to Operating Systems, Second Edition, Addison Wesley, 1990.
4. William Stallings, Operating Systems: Internals and Design Principles, Pearson Education Limited, 2014.
5. Anshuman Sharma, Fundamentals of Operating System, Lakhanpal Publishers, 2nd Edition.

Note: The latest editions of the books should be followed.

Bachelor of Arts / Bachelor of Science(Economics) Semester III
Session 2025-26
COURSE CODE: BARM-3124, BECM-3124
COMPUTER APPLICATIONS (VOCATIONAL)
(OPERATING SYSTEM)
(PRACTICAL)

Examination Time: 3 +3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical: 30**
Credits: 4 **CA: 30**

Practical based on Operating System.

Bachelor of Arts / Bachelor of Science(Economics) Semester IV
Session 2025-26
Punjabi (Compulsory)
COURSE CODE- BARL/BECL-4421

ਸਮਾਂ : 3 ਘੰਟੇ **Maximum Marks: 100**
L-T-P **Theory : 70**
4-0-0 **CA :30**

ਅੰਕਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕਲਈਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨਪੱਤਰ ਦੇ ਚਾਰ (ਂਣ) ਸੈਕਸ਼ਨਹੋਣਗੇ।ਸੈਕਸ਼ਨ੍ਂਣ ਤੱਕ ਦੇ ਪ੍ਰਸ਼ਨਕ੍ਰਮਵਾਰ ਯੂਨਿਟਜ਼ਜ਼ਜ਼ ਵਿਚੋਂਪੁੱਛੇ ਜਾਣਗੇ। ਹਰ ਯੂਨਿਟਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕ੍ਯੁੱਲ ਪੰਜਪ੍ਰਸ਼ਨਕਰਨੇ ਹਨ। ਹਰ ਸੈਕਸ਼ਨਵਿਚੋਂਇਕਪ੍ਰਸ਼ਨਕਰਨਾਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂਪ੍ਰਸ਼ਨਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨਵਿਚੋਂਕੀਤਾਜਾ ਸਕਦਾ ਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 14ਅੰਕਹਨ।
4. ਪੇਪਰ ਸੈੱਟ ਕਰਨਵਾਲਾਜੇਕਰਚਾਹੇ ਤਾਂਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡਅੱਗੋਂਵੱਧਤੋਂਵੱਧਚਾਰ ਉਪ ਪ੍ਰਸ਼ਨਾਂਵਿਚਕਰ ਸਕਦਾ ਹੈ।

ਪਾਠਕ੍ਰਮ ਅਤੇ ਪਾਠ ਪੁਸਤਕਾਂ

ਯੂਨਿਟ1

ਗਲੀਏ ਚਿਕੜੁ ਦੂਰਿ ਘਰੁ (ਸਵੈਜੀਵਨੀ): ਸ.ਸ.ਵਣਜਾਰਾ ਬੇਦੀ, ਕਸਤੂਰੀ ਲਾਲਐਂਡ ਸੰਨਜ਼, ਅੰਮ੍ਰਿਤਸਰ
(ਨਾਇਕ ਬਿੰਬ/ਸਵੈ ਜੀਵਨੀ ਦੇ ਤੌਰ ਤੇ ਪਰਥੇ/ਵਾਰਤਕ ਸ਼ੈਲੀ)

ਯੂਨਿਟ2

ਫ਼ਾਸਲੇ (ਨਾਟਕ) ਯਜਤਿੰਦਰਬਰਾੜ,
(ਵਿਸ਼ਾਵਸਤੂ/ਸਾਰੇਨਾਟਕ ਕਲਾ)

ਯੂਨਿਟ3

(ਓ) ਲੇਖ ਰਚਨਾ (ਸਮਾਜਕ, ਸਭਿਆਚਾਰਕ, ਇਤਿਹਾਸਕ ਅਤੇ ਵਿਦਿਅਕ ਸਰੋਕਾਰਾਂ ਸੰਬੰਧੀ)
(ਅ) ਅਖ਼ਬਾਰਵਿਚਇਸ਼ਤਿਹਾਰ

ਯੂਨਿਟ4

ਵਿਆਕਰਣ
(ਓ) ਦਿੱਤੇ ਪੈਰ੍ਹੇ ਵਿਚੋਂਅਸ਼ੁੱਧ ਸ਼ਬਦਜੋੜਾਂ ਨੂੰਸ਼ੁੱਧ ਕਰਨਾ
(ਅ) ਗੁਰਮੁਖੀਲਿਪੀਦੀਆਂਵਿਸ਼ੇਸ਼ਤਾਵਾਂ

Bachelor of Arts / Bachelor of Science(Economics) Semester IV
Session 2025-26
Basic Punjabi (In lieu of Punjabi Compulsory)
COURSE CODE- BARL/BECL-4031

CO1:ਮੁੱਢਲੀਪੰਜਾਬੀਦੇਵਿਦਿਆਰਥੀ **'ਆਤਮਅਨਾਤਮ'** **(ਕਵਿਤਾਭਾਗ)** ਦੇ ਨਾਮਵਰਕਵੀਆਂਮੋਹਨਸਿੰਘ,ਜਗਤਾਰ,ਸੁਰਜੀਤਪਾਤਰ,ਪਾਸ਼ਦੀਆਂਰਚਨਾਵਾਂਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤਵਿਆਖਿਆ ਤੋਂਜਾਣੂਹੋਣਗੇ।

CO2:ਮੁੱਢਲੀਪੰਜਾਬੀਦੇਵਿਦਿਆਰਥੀ**'ਆਤਮਅਨਾਤਮ'** **(ਕਵਿਤਾਭਾਗ)** ਦੇ ਵੱਖੋਵੱਖਰੀਆਂਧਾਰਾਵਾਂਨਾਲਸਬੰਧਤਮੋਹਨਸਿੰਘ,ਜਗਤਾਰ,ਸੁਰਜੀਤਪਾਤਰ,ਪਾਸ਼ਦੀਆਂਰਚਨਾਵਾਂਦੇ ਸਾਰਤੋਂਜਾਣੂਹੋਣਗੇ।

CO3: ਮੁੱਢਲੀਪੰਜਾਬੀਦੇਵਿਦਿਆਰਥੀ **'ਆਤਮਅਨਾਤਮ'** **(ਕਵਿਤਾਭਾਗ)** ਦੇ ਵੱਖੋਵੱਖਰੀਆਂਧਾਰਾਵਾਂਨਾਲਸਬੰਧਤਮੋਹਨਸਿੰਘ,ਜਗਤਾਰ,ਸੁਰਜੀਤਪਾਤਰ,ਪਾਸ਼ਕਵੀਆਂ ਦੇ ਜੀਵਨ ਅਤੇ ਰਚਨਾਤੋਂਜਾਣੂਹੋਣਗੇ।

CO4: ਲੇਖ ਰਚਨਾਦਾਮਨੋਰਥਵਿਦਿਆਰਥੀਆਂ ਦੀ ਬੁੱਧੀਨੂੰ ਤੀਖਣਕਰਦਿਆਂਉਨਾਂ ਦੀ ਲਿਖਣਪ੍ਰਤਿਭਾਨੂੰ ਉਜਾਗਰਕਰਨਾ ਹੈ।ਸ਼ਬਦਜੋੜਾਂ ਦੇ ਨਿਯਮਨੂੰ ਸਿਲੇਬਸ ਵਿਚਸ਼ਾਮਿਲਕਰਨਦਾਮਕਸਦਵਿਦਿਆਰਥੀਆਂਦੁਆਰਾ ਲਿਖਤ ਵਿਚਕੀਤੀਆਂਜਾਣਵਾਲੀਆਂਗਲਤੀਆਂਨੂੰ ਸੁਧਾਰਨਾ ਹੈ।

Bachelor of Arts / Bachelor of Science(Economics) Semester IV
Session 2025-26
Basic Punjabi (In lieu of Punjabi Compulsory)
COURSE CODE- BARL/BECL-4031

ਸਮਾਂ : 3 ਘੰਟੇ **Maximum Marks: 100**
L-T-P **Theory :70**
4-0-0 **CA :30**

ਅੰਕਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕਲਈਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨਪੱਤਰ ਦੇ ਚਾਰ (A-D) ਸੈਕਸ਼ਨ ਹੋਣਗੇ।ਸੈਕਸ਼ਨA-D ਤੱਕ ਦੇ ਪ੍ਰਸ਼ਨਕ੍ਰਮਵਾਰ ਯੂਨਿਟI-IV ਵਿਚੋਂਪੁੱਛੇ ਜਾਣਗੇ। ਹਰ ਯੂਨਿਟਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜਪ੍ਰਸ਼ਨਕਰਨੇ ਹਨ।ਹਰ ਸੈਕਸ਼ਨਵਿਚੋਂਇਕਪ੍ਰਸ਼ਨਕਰਨਾਲਾਜ਼ਮੀਹੈ।ਪੰਜਵਾਂਪ੍ਰਸ਼ਨਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨਵਿਚੋਂਕੀਤਾਜਾ ਸਕਦਾਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 14ਅੰਕਹਨ।
4. ਪੇਪਰ ਸੈੱਟਕਰਨਵਾਲਾਜੇਕਰਚਾਹੇ ਤਾਂਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋ ਵੱਧ ਤੋਂਵੱਧਚਾਰਉਪ ਪ੍ਰਸ਼ਨਾਂਵਿਚਕਰ ਸਕਦਾਹੈ।

ਪਾਠਕ੍ਰਮ

ਯੂਨਿਟ-I

ਆਤਮਅਨਾਤਮ (ਕਵਿਤਾਭਾਗ)(ਸੰਪਾਦਕਡਾ. ਸੁਹਿੰਦਰ ਬੀਰ ਅਤੇ ਡਾ.ਵਰਿਆਮਸਿੰਘ ਸੰਧੂ)
ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
ਪ੍ਰਸੰਗ ਸਹਿਤਵਿਆਖਿਆ

ਯੂਨਿਟ-II

ਆਤਮਅਨਾਤਮ (ਕਵਿਤਾਭਾਗ)(ਸੰਪਾਦਕਡਾ. ਸੁਹਿੰਦਰ ਬੀਰ ਅਤੇ ਡਾ.ਵਰਿਆਮਸਿੰਘ ਸੰਧੂ)
ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
(ਸਾਰ/ਵਿਸ਼ਾਵਸਤੂ)

ਯੂਨਿਟ-III

ਆਤਮਅਨਾਤਮ (ਕਵਿਤਾਭਾਗ)(ਸੰਪਾਦਕਡਾ. ਸੁਹਿੰਦਰ ਬੀਰ ਅਤੇ ਡਾ.ਵਰਿਆਮਸਿੰਘ ਸੰਧੂ)
ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।
(ਕਵੀਆਂ ਦੇ ਜੀਵਨ ਅਤੇ ਰਚਨਾਬਾਰੇ ਮੁੱਢਲੀਜਾਣਕਾਰੀ)

ਯੂਨਿਟ-IV

ਲੇਖ ਰਚਨਾ
ਅਸ਼ੁੱਧ ਸ਼ਬਦ ਜੋੜਾਂਨੂੰ ਸ਼ੁੱਧ ਕਰਕੇ ਲਿਖਣਾ

Bachelor of Arts / Bachelor of Science(Economics) Semester IV
Session 2025-26
APPRECIATING ENGLISH LITERATURE-II
Course Code: BARL/BECL-4212
(NEP-2020)

COURSE OUTCOMES

After passing this course, the students will be able to:

CO 1: change the narration and voice of sentences after understanding fundamental grammatical rules governing them through the study of "English Grammar in Use" by Raymond Murphy

CO 2: to learn to write personal letters and enhance the writing skills

CO 3: comprehend the meaning of texts and answer questions related to situations, episodes, themes and characters depicted in them through the study of the stories in the text "Tales of Life".

CO 4: appreciate the writings of various Indian and foreign story and Short - Story writers and relate them to their socio-cultural milieu through the study of the stories in the text "Tales of Life".

Bachelor of Arts / Bachelor of Science(Economics) Semester IV
Session 2025-26
APPRECIATING ENGLISH LITERATURE-II
Course Code: BARL/BECL-4212

Max. Marks: 100

Examination Time: 3 Hrs. **Theory: 70**

L-T-P (Credits): 4-0-0 **CA: 30**

Instructions for the Paper Setters:-

Eight questions are to be set, two from each of the four Units (I-IV). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section. Each question will carry 14 marks. (14x5=70)

UNIT-I

English Grammar in Use, 5th Edition by Raymond Murphy, CUP (Revision of Units: 26-37, 42-48, 92-97,113-120)

UNIT-II

Moments in Time: Poems at Sr. No. 1-6

UNIT-III

Moments in Time: Poems at Sr. No. 7-12

UNIT-IV

Paragraph writing, Business Letters, Writing Emails

Texts Prescribed:

1.*English Grammar in Use* (Fourth Edition) by Raymond Murphy, CUP
2.*Moments in Time*
3. *Making Connections*

Bachelor of Science (Economics) Semester –IV
Session 2025-26
Course Code: BECL-4175
Economics (International Economics and Public Finance)

Course outcomes:

After studying this course, students will be able to:

CO1: understand the basis of and gains from international trade and basic understanding of terms of trade and commercial policy and also WTO agreements related to trade.

CO2: understand the basic concept of BOP and methods to correct disequilibrium and determination of exchange rate.

CO3: understand the basics of public finance and public expenditure.

CO4: understand taxes and the burden of public debt.

Bachelor of Science (Economics) Semester –IV
Session 2025-26
Course Code: BECL-4175
Economics (International Economics and Public Finance)

Time: 3 Hours

L-T-P (Credits): 4-0-0
Max. Marks: 100
Theory: 70
CA: 30

Note: Instructions for the Paper–Setter:
Two questions, each carrying 14 marks, from each of the Units I-IV (i.e., a total of eight questions) are to be set. Candidates are required to attempt five questions, selecting at least one from each unit. The fifth question may be attempted from any unit.

UNIT–I

International Trade: Internal and External Trade, Classical and Heckscher-Ohlin Theories, Gains from Trade, Terms of Trade (gross, net, and income terms of trade).Trade and economic development.
Commercial Policy: Free trade vs. protection, the rationale of a protectionist policy in a less developed area, GATT & WTO (Introductory).

UNIT–II

Balance of Payments: Meaning and components of balance of payments, Methods for Correcting adverse balance of payments, devaluation and direct control.
Rate of Exchange: Meaning and determination (PPP and BOP Theory), Fixed and flexible exchange rates.

UNIT–III

Public Finance: Nature, scope and importance.
Public Expenditure: Meaning, principles, importance, and effect of public expenditure on production and distribution.

UNIT–IV

Public Revenue: Meaning and Sources of Revenue -Tax and non-tax revenue, Features of a good taxation system, canons of taxation, incidence, and impact of taxation.
Public Debt: Meaning, objectives, importance, its burden.

Case Study: India's EXIM Policy

Suggested Readings:
1. Sodersten, B.O. (1970), *International Economics,* Macmillan, London.
2. Salvatore, D. and Reed, G. (1983), *International Economics,* Macmillan Publishing Company, New York.
3. Tyagi, B.P. (3004), Public Finance, Jai Prakash Nath & Company, Meerut.

Note: The latest editions of the books are recommended.

Bachelor of Science (Economics) Semester –IV
Session: 2025-26
Course Code: BECL-4453
Quantitative Techniques–IV

Course outcomes:

After passing this course, students will be able to**:**

CO1: understand the concept of correlation and regression and learn how to apply these statistical techniques in practice

CO2: understand the axiomatic formulation of modern probability theory and think of random variables as an intrinsic need for the analysis of random phenomena.

CO3: recognize the connection between theory and applications by appropriately fitting, assessing and interpreting the results/ outcomes

CO4: understand the basic principles underlying survey design and estimation.

Bachelor of Science (Economics) Semester –IV
Session 2025-26
Course Code: BECL-4453
Quantitative Techniques (Quantitative Techniques–IV)

Time: 3 Hours

L-T-P (Credits):4-0-0
Max. Marks: 100
Theory: 70
CA: 30

Note: Instructions for the Paper Setter:

Two questions, each carrying 14 marks, from each of the Units I-IV (i.e., a total of eight questions) are to be set. Candidates are required to attempt five questions, selecting at least one from each unit. The fifth question may be attempted from any unit.

UNIT–I

Multiple Linear Regression: Concepts, Estimation and Applications (without derivations). Partial and Multiple Correlation. Non-Linear Regression: Quadratic and Exponential; Estimation of Fitting of Various Growth Curves (Modified Exponential, Gompertz).

UNIT–II

Probability: Definition, Additive & Multiplicative Laws and their Applications, Bayes Theorem, Concept of Random Variable, Probability Mass Function & Density Function, Mathematical Expectation (meaning and properties), Moments, Moment Generating Function and Characteristic Function.

UNIT–III

Theoretical Probability Distributions: Derivations of the properties of Binomial (with numerical), Poisson (with numerical), Normal (with numerical), Beta and Gamma Distributions.

UNIT–IV

Sampling: Various concepts – Population, Sampling Units, Complete Enumeration sample Surveys, Concept of an Estimator and The Standard Error, Standard Error of Estimates. Features of a Good Sample, Random and Subjective Sampling, Simple Random Sampling (with and without replacement), and Stratified Random Sampling (applications only).

Suggested Readings:

1. Gupta, S.C. (2018), Fundamentals of Statistics, Himalaya Publishing House, 7th Edition, Delhi
2. Gupta, S.P. (2014), Statistical Methods, Sultan Chand & Sons, 43rd Edition, Delhi
3. Rangi, S. S. and Nayyar, R.K. (2014), Statistical Techniques (Vol. II), S. Vikas and Company, India.
4. Siegel, Andrew F. (2002), Practical Business Statistics, International Edition, 5th Edition, McGraw Hill Irwin.

Note: The latest editions of the books are recommended.

Practical: Correlation and Regression with Statistical Softwares

Bachelor of Arts/ Bachelor of Science (Honours)
Semester–IV
Session: 2025-26
Course Title: Mathematics (Analysis)
Course Code: BARL/ BECL-4333

Course Outcomes

After passing this course, the students will be able to:

CO 1: Demonstrate an understanding of limits and how they are used in sequences.

CO 2: Understanding how limits are used in series and apply various test on series.

CO 3: To understand the concepts of Riemann sum, partitions, upper and lower sums, Riemann Inerrability of continuous functions and of monotone functions. Distinguish between the absolute convergence and conditional convergence.

CO 4: To know Conditions for existence of improper integrals, Tests for the convergence of the improper integrals of different kinds, Absolute convergence.

Bachelor of Arts/ Bachelor of Science (Honours)
Semester–IV
Session: 2025-26
Course Title: Mathematics (Analysis)
Course Code: BARL/ BECL -4333

Examination Time: 3 Hours **Max. Marks: 100**

L T P **Theory: 70**

4 0 0 **CA: 30**

Instructions for the Paper Setter: Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

Unit I

Sequence, Subsequence, Limit point of a sequence, Theorems on limits of sequences, Convergence and divergence of a sequence, Bounded and monotonic sequences and their behavior, Squeeze Theorem on sequences, Bolzano-Weierstrass theorem (statement only), Definition of Cauchy sequence, Cauchy's convergence Criterion, Cauchy's first theorem on limits with its applications, Cauchy's second theorem on limits with its applications.

Unit II

Series of non-negative terms, Convergence and divergence of infinite series, Cauchy convergence criterion for series, Comparison tests for convergence. Cauchy's condensation test, Cauchy's integral test, Cauchy's root test, D'Alembert's ratio test, Comparison between Cauchy's root test and D'Alembert's ratio test, Logarithmic test, Gauss test, Alternating series, Leibnitz's test.

Unit III

Partition of an interval, Riemann upper and lower sums, Riemann upper and lower integrals, Riemann integrability, Necessary and sufficient conditions for a bounded function to be Riemann integrable, Riemann integrability of continuous functions, monotone functions, and composition of functions, Darboux theorem, Fundamental Theorem of calculus.

Unit IV

Improper integrals, Conditions for existence of improper integrals, Tests for the convergence of theimproper integrals of different kinds, Absolute convergence.

Text Book:-

S.C. Malik, Mathematical Analysis, Wiley Eastern Ltd. (1991).

Reference Book:

Tom M. Apostol, Calculus: An Indian Adaptation, Wiley India, 2022.

Bachelor of Arts/ Bachelor of Science (Honours)
Semester–IV
Session: 2025-26
Course Title: Analysis Laboratory
Course Code: BARP/ BECP -3333

Examination Time: 3 Hours **Max. Marks: 50**
Practical: 35
L T P **CA: 15**
0 0 1

List of Practicals (using any package)

1. Generate bounded sequences.
2. Visualize bounded sequences using plots.
3. Study the convergence of sequences through plotting.
4. Visualize monotonic sequences using plots.
5. Investigate convergence of series.
6. Visualization of convergence tests: Cauchy Root test and D' Alembert Ratio test.
7. Approximating radius of convergence of a power series.

Text Books:-

1. S.S. Sastry, Engineering Mathematics - Volume I (4th Edition), PHI, 2008.
2. S.S. Sastry, Engineering Mathematics - Volume II (4th Edition), PHI, 2008.

Bachelor of Arts (Honours)/Bachelor of Science (Economics) (Honours)
Semester- IV
(Session 2025-26)
Course Code: BARM-4134, BECM-4134
COMPUTER SCIENCE
(DATA STRUCTURES)

Course Outcomes:

After passing course the student will be able to:

CO1: Analyze complexity of algorithms to determine their efficiency.

CO2: Comprehend various hashing method, sorting and searching algorithms.

CO3: Comprehend various operations of stack and queue along with different scenarios.

CO4: Comprehend advanced data structures such as tree and graph.

Bachelor of Arts (Honours)/Bachelor of Science (Economics) (Honours) Semester- IV
(Session 2025-26)
Course Code: BARM-4134, BECM-4134
COMPUTER SCIENCE
(DATA STRUCTURES)
(THEORY)

Examination Time: 3 +3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical:30**
Credits: 4 **CA: 30**

Instructions for Paper Setter -
Eight questions of equal marks (8 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section. The students can use Non–programmable/ scientific & Non–storage type calculator.

UNIT–I

Data Structures: Introduction to elementary data organization, Common Operation on Data Structures, Algorithm Complexity, Big O Notation, Time-Space Tradeoff between Algorithms. **Arrays:** Array defining, representing arrays in memory, various operations on linear arrays, Multi-Dimensional arrays.

UNIT–II

Linked Lists: Types of Linked Lists, representing linked list in memory, advantages of using linked lists over arrays, various operations of linked lists. **Stacks:** Description of stack structure, Implementation of stack, using arrays and linked lists, application of stack-converting, arithmetic expression from infix notation to polish notation and their subsequent evaluation, quicksort technique.

UNIT–III

Queues: Description of queue structure, Implementation of queue using arrays and linked lists, description or priorities of queues, deques. **Sorting and Searching:** Sorting Algorithms, bubble sort, selection sort, insertion sort, quick sort, merge sort, heap sort, searching Algorithms, linear search and binary search.

UNIT-IV

Trees: Description of Tree Structure and its Terminology, Binary Trees and Binary Search Trees and their representation in Memory, Heapsort. **Graphs:** Description of Graph Structure, Implement Graphs in Memory using Adjacency Matrix, Path Matrix, graph traversal techniques - DFS, BFS.

References / Textbooks:

1. Seymour Lipschutz, Data Structures with C (Schaum's Outline Series), McGraw Hill Education (2017), 1st Edition
2. Reema Thareja, Data Structures Using C, Oxford Publication (2014), 2nd Edition
3. Sahni Horowitz, Fundamentals of Data Strucetures in C (2008), 2nd Edition
4. Narasimha Karumanchi, Data Structures and Algorithms made easy, Careermonk Publications (2016), 5th Edition
5. S.K. Srivastava and Deepali Srivastava, Data Structures through C, BPB Publications (2004)
6. Yedidyah Langsam, Augestein and Tanenbaum, Data Structures using C and C++, Pearson Education India (2015), 2nd Edition

Bachelor of Arts (Honours)/ Bachelor of Science (Economics) (Honours) Semester- IV
(Session 2025-26)
Course Code: BARM-4134, BECM-4134
COMPUTER SCIENCE
(DATA STRUCTURES)
(PRACTICAL)

Examination Time: 3 +3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical:30**
Credits: 4 **CA: 30**

Lab Exercises based on Implementation of Data Structures using C:

- Searching (binary search, linear search)
- Sorting: Bubble Sort, selection sort, insertion sort, quick sort, merge sort, heap sort.
- Linked list
- Stacks (Using Arrays)
- Queues (Using Arrays)
- Trees – Traverse the BST
- Graphs-transversal, finding the shortest path

Bachelor of Arts / Bachelor of Science(Economics) Semester IV (Session 2025-26)
COURSE CODE: BARM-4124, BECM-4124
COMPUTER APPLICATIONS (VOCATIONAL)
(RELATIONAL DATA BASE MANAGEMENT SYSTEMS)

Course Outcomes:

After passing this course the student will be able to:

CO1: Illustrate the concept of data models, database normalization along with its various forms.
CO2: Apply SQL to design basic to intermediate level of databases.
CO3: Apply various built-in functions for formatting of data.
CO4: Comprehend the concept of PL/SQL and its relationship with SQL.

Bachelor of Arts / Bachelor of Science(Economics) Semester IV (Session 2025-26)
COURSE CODE: BARM-4124, BECM-4124
COMPUTER APPLICATIONS (VOCATIONAL)
(RELATIONAL DATA BASE MANAGEMENT SYSTEMS)
(THEORY)

Examination Time: 3 +3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical:30**
Credits: 4 **CA: 30**

Instructions for Paper Setter -
Eight questions of equal marks (10 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT–I

Basic Concepts: An overview of Database Management, (database, database system, why database). An architecture for a database system (levels of the architecture, mapping, data independence), DBA, Definition of CODD's Rules.
Normalization of Data: First, Second and Third Normal form, **Database Models:** Hierarchical, Network, Relational, Introduction to Relational database systems.

UNIT II

ORACLE: Introduction to Oracle, **Data Types:** Char, numbers, varchar, varchar2, date, long.
DDL Commands of SQL: Create Tables, Constraints, Alter Table, Drop Table, Rename.
Data Manipulation Language: Insert Into, Update Statement, Delete Statement, Select statement (Select distinct, Select from where, Select from where order by, Select group by clause, Select Group by having clause).
Transaction Control Language: Rollback, Savepoint, Commit.

UNIT III

Built in Functions- Aggregate Functions (Sum, Avg, max, min, count), Character Functions (Lower, Upper, Length, Substr, RPAD, LPAD), Arithmetic Functions (Round, Trunc, Sqrt, Mod, Abs, Sine) Date and Time Functions and Other Miscellaneous Functions (Add-months, Month-between, NVL, NVL2, decode) & Conversion Functions (to-char,to-number, to-date). Join methods and Sub query, Union, Intersection, Minus, Views.

UNIT IV

PL/SQL: Introduction to PL/SQL, Relationship between SQL & PL/SQL, Advantages, block structure, Valuable and Constant declaration, Declaration using variable attributes - %type, %rowtype, control statements.

References:

1. Silberschatz, Korth&Sudarshan, Database Systems Concepts, McGraw-Hill Inc.(2020), 7th edition.
2. C.J. Date, An Introduction of Database System, Addison-Wesley Publishing co. (2003), 8th edition.
3. Anshuman Sharma, Fundamentals of DBMS, Lakhanpal Publishers (2016), 4th edition.
4. Ivan Bayross, SQL/PL/SQL. The Programming Language of Oracle, BPB Publications(2010), 4th edition.
5. RamezElmasri and ShamkantNavathe, Fundamentals of Database Systems, Pearson Education (2015), 7th edition.
6. P.S. Gill, Database Management Systems, Dreamtech Press (2019), 2th edition.

Bachelor of Arts / Bachelor of Science(Economics) Semester IV
(Session 2025-26)
COURSE CODE: BARM-4124
BECM-4124
COMPUTER APPLICATIONS (VOCATIONAL)
(RELATIONAL DATA BASE MANAGEMENT SYSTEMS)
(PRACTICAL)

Examination Time: 3 +3 Hrs. **Max. Marks: 100**
Theory: 40
L-T-P: 3-0-1 **Practical:30**
Credits: 4 **CA: 30**

Practical on Relational Data Base Management System.

Bachelor of Arts/Bachelor of Science (Economics) Semester IV
Session 2025-26
Skill Enhancement Course
Course Title: Contemporary Indian Economic Policies and Issues

Course Outcomes:
After passing this course, students will be able to:

CO1: Understand the nature and importance of agriculture and industrial policies

CO2: Learn the working of credit and insurance schemes

CO3: Examine the benefits and challenges in the implementation of various schemes

CO4: Understand the instruments of monetary and fiscal policies

Bachelor of Arts/Bachelor of Science (Economics) Semester IV
Session 2025-26
Skill Enhancement Course
Course Title: Contemporary Indian Economic Policies and Issues

Time: 3 Hours

L-T-P (Credits):3-0-0
Max. Marks: 100
Theory: 50
Practical: 20
CA: 30

Note: Instructions for the Paper Setter:
Two questions, each carrying 10 marks, from each of the Units I-IV (i.e., a total of eight questions) are to be set. Candidates are required to attempt five questions, selecting at least one from each unit. The fifth question may be attempted from any unit.

Unit-I

Agriculture: Recent agriculture price policy with special focus on MSP.
Recent industrial policy and its benefits to various stakeholders.

Unit -II

Efficacy of credit and insurance schemes by banks and financial institutions, with a special focus on agriculture (PMFBY, KCC), industry (MUDRA Scheme, MSME scheme), and education loan schemes.

Unit-III

Women-centric Schemes for Empowerment: Beti Bachao Beti Padhao, Mahila Shakti Kendra, Mahila Kisan Sashaktikaran Pariyojna, Rastriya Mahila Kosh, Pradhan Mantri Matru Vandana Yojna, Janani Suraksha Yojna, Mission Saksham Anganwadi, and Poshan 2.

Welfare Schemes for Poverty Alleviation: Mahatma Gandhi National Rural Employment Guarantee Act, Pradhan Mantri Gram Sadak Yojana, Pradhan Mantri Kaushal Vikas Yojana, Pradhan Mantri Jan Dhan Yojana, Swarna Jayanti Shahari Rozgar Yojana.

Unit-IV

Current monetary and fiscal policies and their interaction.

Practical

Students can choose any one topic for the Case Study

MSP of various crops in the local area and its implications for farmers

Analysis of the credit and insurance schemes mentioned above in the local area.

Efficacy of any women-centric scheme in the local area.

Analysis of trends in the inflation rate and union budget

Suggested Readings:

1. Mishra, S.K. and Puri, V.K. (3019), *Indian Economy,* Himalaya Publication House, Mumbai.
2. Dutt, R. and Sundharam, *K.P.M.* (3018), *Indian Economy,* S. Chand & Co. Ltd., New Delhi.
3. Aggarwal, A. N. (1975), *Indian Economy,* Vikas Publishing House, Delhi.
4. Wadhwa, C. D. (1970), *Indian Economic Policy,* Tata McGraw-Hill, Bombay.

Note: The latest editions of the books are recommended.