FACULTY OF ECONOMICS AND BUSINESS

SYLLABUS
of
Bachelor of Science (Economics)
(Semester I-Vl)
(Under Continuous Evaluation System)

Session: 2020-21

The Heritage Institution
KANYA MAHA VIDYALAYA
JALANDHAR
(Autonomous)

Program Specific Outcome – Bachelor of Science (Economics)

B.Sc. (Economics) is a three year graduation degree program. The program aims at creation and dissemination of knowledge regarding core economic principles and issues; focusing on the link between theory and real world.

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

PSO1: understand the basic concepts and principles of economics.

PSO2: have in depth knowledge of concepts and basic theories of consumer behaviour, cost and market structure, and production behaviour.

PSO3: have in depth knowledge of concepts and basic macroeconomics theories such as employment, consumption, investment and international trade, money, banking, development and public finance.

PSO4: understand basic techniques of presentation and analysis of data; and some advanced applications and theory of theoretical and sampling distribution and econometric estimation methodologies.

PSO5: understand Indian experience with planning and various problems faced by Indian economy and latest developments in Indian economy.

Kanya Maha Vidyalaya, Jalandhar (Autonomous)
SCHEME AND CURRICULUM OF EXAMINATIONS OF THREE YEAR DEGREE PROGRAM

Bachelor of Science (Economics)

Session: 2020-21

Bachelor of Science (Economics) Semester I									
Course Code		**Course Name**			**Course Type**	**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	50	40 / -	10	3
BECL-1212		English (Compulsory)			C	50	40 / -	10	3
BECM-1333		**Mathematics**	I	(Algebra)	E	100	80 (40+40) / -	20	3+3
			II	(Calculus and Trigonometry)					
BECL-1453		**Quantitative Techniques** (Quantitative Techniques-I)			E	100	80 / -	20	3
BECM-1134		**Computer Science** (Computer Fundamental and PC Software)			E	100	50 / 30	20	3+3
	(P)	**Computer Science**(Computer Fundamental and PC Software) (PRACTICAL)							
BECM-1124		**Computer Applications (Vocational)**(Computer Fundamentals and PC Software)			E	100	50 / 30	20	3+3
	(P)	**Computer Applications (**Computer Fundamentals and PC Software) (PRACTICAL)							
BECL-1175		**Economics**(Microeconomics)			C	100	80 / -	20	3
AECD-1161		*Drug Abuse: Problem Management and Prevention (Compulsory)			AC	50	40 / -	10	3
SECF-1492		*Foundation Course			AC	25	20 / -	5	1
Total						**400**			

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 2020-21
PUNJABI (COMPULSORY)

COURSE CODE: BECL -1421

COURSE OUTCOMES

CO1: d or (eftsk Gkr) B gVkTD dk wBoE ftfdnkoEhnK ndo eftsk gsh fdbuAgh, AM B gdk eoBk j sK fe Tj nkXfBe do ftu uzb ojhnK ekft Xkoktk ns ethnK pko frnkB jkfAb eo AeD I

CO2: fJA dk jo wBoE eftsk dh ftnkfynk, ftPbPD s wbeD dh gfefonk sA ikD eokTDk th j sK fe Tj Awekbh Awki dhnK AwzfAnktK B AwM AeD ns nkbuBkswe fdPNh pDk AeD I

CO3: AAko dhnK gfAX jAshnK ihtBh dh ftXk B fAbpA ftu Pkfwb eo e ftfdnkoEhnK ndo ihtBh B gVD dh ouh B gdk eoBk j ns ihtBh irs Bkb iVDk j I

CO4: gok ouBk ns gok gV e gPBK d Tso dD dk wBoE ftfdnkoEhnK dh pZXh B shyD eofdnK TBK dh fbyD gfsGk B Tikro eoBk j I

CO6:XBh ftTAs gVD Bkb ftfdnkoEh XBhnK dh TukoB gDkbh sA tke| jDr I

Bachelor of Science (Economics)
(Semester–I)
Session 2020-21
PUNJABI (COMPULSORY)

COURSE CODE: BECL -1421

AY?: S xN **Maximum Marks: 50**

Theory: 40

CA: 10

gTO eY N7 gTO gA7e?

:fwN-I

Y or (eft7T GTr) (AgT. UofKYo fAx fYWA N7 gh7Y fAx AorOhNT), ro wTwe Yt :whtofANh, NfY7Aol

(ਕਿਵਤਾ ਦਾ ਿਵਸ਼ਾ-ਵਸਤੂ ATo)**8 Ne**

:fwN-II

AATo YhN? gfAO UA7hN? (Khtwh w: 1 7A 9 7e)

(AgT. fg. 7KT fAx, UowTY fAx PTY),gKTph ATfU7 geTPw, NfY7Aol

(ਿਵਸ਼ਾ-ਵਸਤੂ/ਸਾਰ) **8 Ne**

:fwN-III

(A) goT ouwT (f7w ftuA fTe)

(N) goT gV e gPw? Y A7ol **8 Ne**

:fwN-IV

(A) gKTph Owh ftA7 : gfoGTPT 7 AuTow Nr

(N) Ato, ftNKw **8 Ne**

Ne tv N7 gohfyNe WTh UYTfT7?

1. **gPw gZ7o Y uTo AePw U7rlAePw A-D 7Ze Y gPw :fwN I-IV ftuA gZS KT7rl Uo AePw ftu Y gPw gZS KT7rl**
2. **ftfYNToEh w eW gK gPw eow Uwl Uo AePw ftuA fTe gPw WT!Yh Ul gKt? gPw feA th AePw ftuA eh7T KT AeYT Ul**
3. **Uoe gPw Y 08 Ne Uwl**
4. **ggo AZN eow tTWT Keo uTU 7? gPw? Yh tv NZrA tZO 7A tZO uTo Ag gPw? ftu eo AeYT Ul**

Bachelor of Science (Economics)
(Semester–I)
Session 2020-21

BASIC PUNJABI
In lieu of Punjabi (Compulsory)
COURSE CODE: BECL -1031

Course outcomes

CO1:YZYWh gKTph gVTA7 YT YwoE ftfYNToEhN? w gKTph GTPT w fAyTA7 Yh gfefoNT ftu gT e fTe Uo GTPT fAZy7 YT YeT gYTw eowT UI

CO2:fTA ftu ftfYNToEh w pTohephwh wTW GTPT YT NfONw eotTfTNT KTtrTI

CO3:ftfYNToEhN? w gKTph PpY ouwT 7A KT7 eotTfTNT KTtrTI

CO4:YZYWh gKTph gVTA7 YT YwoE ftfYNToEhN? w fwZ7 to7A Yh gKTph PpYTtWh pTo YZA7T UI

CO5:YZYWh gKTph gVTA7 YT YwoE ftfYNToEhN? YT PpY xoT ftPTW eowT UI

CO6:ftfYNToEhN? w gKTph ftu U|7 Y AZ7 fYw? Y w?, pTo? YUhfwN? Y w?, oZ7? Y w?, fTe 7A A 7Ze fr77h PpY? ftu fAyTA7T UI

Bachelor of Science (Economics)
(Semester–I)
Session 2020-21

BASIC PUNJABI
In lieu of Punjabi (Compulsory)
COURSE CODE: BECL -1031

AY? : S xN **Maximum Marks: 50**

Theory : 40

CA 10

gTO eY

:fwN-I

gA7h NZyoh, NZyo eY, go fpYh tTW to7 N7 go ftu g7 tTW to7 N7 YT7t? (YZYWh KT7 gST7) WrTyo (fpYh, fNZgh, NZOe) : gST7 N7 to7A ▌

08Ne

:fwN-II

gKTph PpY p77o : YZYWh KT7 gST7 (ATOTow PpY, A:e7 PpY, fYPo7 PpY, YW PpY, Nr7o N7 fgS7o)

08Ne

:fwN-III

fwZ7 to7A Yh gKTph PpYTtWh : pT!To, tgTo, foP7wT7, y7h N7 Uo OfYN? NTfYwTW ApO7▌ **08 Ne**

:fwN-IV

U|7 Y AZ7 fYw? Y w?, pTo? YUhfwN? Y w?, oZ7? Y w?, fTe 7A A 7e frr77h PpY? ftu ▌

Ne tv N7 gohfyNe WTh UYTfT7?

1. **gPw gZ7o Y uTo AePw U7r▌AePw A-D 7Ze Y gPw :fwN I-IV ftuA gZS KT7r▌ Uo AePw ftu Y gPw gZS KT7r▌**
2. **ftfYNToEh w eZW gK gPw eow Uw▌ Uo AePw ftuA fTe gPw WT!Yh U▌ gKt? gPw feA th AePw ftuA eh7T KT AeYT U▌**
3. **Uoe gPw Y 08 Ne Uw▌**
4. **ggo AZN eow tTWT Keo uTU 7? gPw? Yh tv NZrA tZO 7A tZO uTo Ag gPw? ftu eo AeYT U▌**

Bachelor of Science (Economics)
(Semester–I)
Session 2020-21
Course Title: Punjab History and Culture (From Earliest Times to C 320)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)
Course Code: BECL-1431

COURSE OUTCOMES

After completing Semester I and course on Punjab History and Culture students of History will be able to identify and have a complete grasp on the sources & writings of Ancient Indian History of Punjab.

CO1: Identify and describe the emergence of earliest civilizations in: Indus Valley Civilization and Aryan Societies.

CO2: Identify and analyses the Buddhist, Jain and Hindu faith in the Punjab

CO3: Analyses the emergence of Early Aryans and Later Vedic Period, their Society, Culture, Polity and Economy

CO4: To make students understand the concepts of two faiths Jainism and Buddhism, its principles and their application and relevance in present times

Bachelor of Science (Economics)
(Semester–I)
Session 2020-21
Course Title: Punjab History and Culture (From Earliest Times to C 320)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)
Course Code: BECL-1431

Examination Time: 3 Hours **Max. Marks: 50**
Theory: 40
C A: 10

Instructions for the Paper Setters

1. Question paper shall consist of four Units
2. Examiner shall set 8 questions in all by selecting **Two Questions** of equal marks from each Unit.
3. Candidates shall attempt **5 questions** in **600 words,** by at least selecting **One Question** from each Unit and the **5th question** may be attempted from any of the **four Units**.
4. Each question will carry 8 marks.

Unit-I

1. Physical features of the Punjab
2. Sources of the ancient history of Punjab

Unit-II

3. Harappan Civilization: social, economic and religious life of the Indus Valley People.
4. The Indo-Aryans: Original home

Unit-III

5. Social, Religious and Economic life during Early Vedic Age.
6. Social, Religious and Economic life during Later Vedic Age.

UNIT-IV

7. Teachings of Buddhism
8. Teachings of Jainism

Suggested Readings

- L. M Joshi (ed.), *History and Culture of the Punjab*, Art-I, Patiala, 1989 (3rd edition)
- L.M. Joshi and Fauja Singh (ed.), *History of Punjab*, Vol.I, Patiala 1977.
- Budha Parkash, *Glimpses of Ancient Punjab*, Patiala, 1983.
- B.N. Sharma, *Life in Northern India*, Delhi. 1966.
- Chopra, P.N., Puri, B.N., & Das, M.N.(1974). *A Social, Cultural & Economic History of India,* Vol. I, New Delhi: Macmillan India.

Bachelor of Science (Economics)
(Semester–I)
Session 2020-21
ENGLISH (COMPULSORY)
Course Code: BECL -1212

COURSE OUTCOMES

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

CO 1: appreciate the writings of various Indian and foreign story and prose writers and relate them to their socio-cultural milieu

CO 2: comprehend the meaning of texts and answer questions related to situations, episodes, themes and characters depicted in them

CO 3: understand fundamental grammatical rules governing tenses, the use of modal verbs and make correct usage in their language

CO 4: develop an understanding of translation of written text from Hindi/Punjabi to English

CO 5: independently write paragraphs on any given topic

Bachelor of Science (Economics)
(Semester–I)
Session 2020-21
ENGLISH (COMPULSORY)
Course Code: BECL -1212

Max. Marks: 50

Examination Time: 3 Hrs **Theory: 40**

CA: 10

Instructions for the Examiner:

The question paper will consist of 4 sections & distribution of marks will be as under:

Section A: The question will be set from Unit I of the syllabus. Fifteen sentences will be set and the students would be required to attempt any ten. Each sentence will carry one mark. **(1x10=10)**

Section B: Two questions will be set from Unit II of the syllabus. The students would be required to attempt one paragraph out of the given two topics (word limit 150 words). It will carry five marks. The second question will be based on translation. The students would be required to translate a paragraph from Hindi/Punjabi to English. **(2x5=10)**

Section C: This section will be divided into two parts. Two questions will be set from Unit III of the syllabus. Part one will have one essay type question with internal choice carrying six marks (word limit 300 words). The students would be required to attempt any one. The second part will have three questions. The students would be required to attempt any two. Each question will carry two marks (50 words each). **(6+2x2=10)**

Section D: This section will be divided into two parts. Two questions will be set from Unit IV of the syllabus. Part one will have one essay type question with internal choice carrying six marks (word limit 300 words). The students would be required to attempt any one. The second part will have three questions. The students would be required to attempt any two. Each question will carry two marks (50 words each). **(6+2x2=10)**

Unit I

English Grammar in Use, 4th Edition by Raymond Murphy, CUP (Units: 1-37)

Unit II

Paragraph Writing and Translation of paragraph (from Hindi/Punjabi to English)

Unit III

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

Unit IV

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

Texts Prescribed:

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

Bachelor of Science (Economics)

(Semester–I)

Session 2020-21

Course Title: Mathematics (Algebra)

Course Code: BECM -1333(I)

Course Outcomes

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

CO 1: Distinguish between solution of cubic equations and Bi-quadratic equations.

CO 2: Classify real quadratic form in variables, definite, semi- definite and indefinite real quadratic form.

CO 3: Understand the concept of matrix congruence of skew symmetric matrices and its reduction in real field.

CO 4: Solve system of linear equations and obtain Eigen values, Eigen vectors, minimal and characteristic equation of a matrix and to apply it in advanced dynamics and electric current.

CO 5: To find the relations between the roots and coefficients of general polynomial equation in one variable.

Bachelor of Science (Economics)

(Semester–I)

Session 2020-21

Course Title: Mathematics (Algebra)

Course Code: BECM -1333(I)

Examination Time: 3 hrs. Max.Marks:50

Theory:40

CA:10

Instructions for the 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 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

Linear independence of row and column vectors. Row rank, Column rank of a matrix, Equivalence of column and row ranks, Nullity of matrix, Applications of matrices to a system of linear (both homogeneous and non–homogeneous) equations. Theorems on consistency of a system of linear equations.

Unit-II

Eigen values, Eigen vectors, minimal and the characteristic equation of a matrix. Cayley Hamilton theorem and its use in finding inverse of a matrix.Quadratic Forms, quadratic form as a product of matrices.The set of quadratic forms over a field.

Unit–III

Congruence of quadratic forms and matrices.Congruent transformations of matrices.Elementary congruent transformations.Congruent reduction of a symmetric matrix.Matrix Congruence of skew–symmetric matrices.Reduction in the real field.Classification of real quadratic forms in 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 in one variable. Transformation of equations and symmetric function of roots, Descarte's rule of signs, Newton's Method of divisors, Solution of cubic equations by Cardon method, Solution of biquadratic equations by Descarte's and Ferrari's Methods.

Text Book:

Chandrika Parsad: Text book on Algebra and Theory of Equations, PothishalaPvt. Ltd., Allahabad.

Reference Books:

1.K.B. Dutta: Matrix and Linear Algebra, Prentice Hall of India Pvt. Ltd., New Delhi (2002).
2.Shanti Narayan and P.K. Mittal : Text Book of Matrices.
3.S. Hall and S.R. Knight: Higher Algebra, H.M. Publications, 1994.

Bachelor of Science (Economics)

(Semester–I)

Session 2020-21

Course Title: Mathematics (Calculus and Trigonometry)

Course Code: BECM -1333(II)

Course Outcomes

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

CO 1: Understand real number system, lub& glb of set of real numbers, limit of a function, basic properties of limit & to apply it in real world problem.

CO 2: Analyse continuous and discontinuous function, Apply concept of continuity in uniform continuity.

CO 3: Manage to solve problems related to successive differentiation, Leibnitz theorem, Taylor's & Maclaurin's theorem with various forms of remainders and to use these expansion to compute values of Sine, Cosine, tangent or log function.

CO 4: Understand the concept of De Moivre's theorem & its applications. Identify circular, hyperbolic function and their inverses and use these function to describe the shape of the curve formed by high voltage line suspended between two towers.

CO 5: Demonstrate exponential and logarithmic function of complex numbers, and to solve Gregory's series and summation of series.

Bachelor of Science (Economics)

(Semester–I)

Session 2020-21

Course Title: Mathematics (Calculus and Trigonometry)

Course Code: BECM -1333(II)

Examination Time: 3 hrs. Max.Marks:50

Theory :40

CA:10

Instructions for the 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 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 properties, lub, glb of sets of real numbers, limit of a function, Basic properties of limits, Continuous functions and classification of discontinuities, Uniform continuities.

Unit-II

Differentiation of hyperbolic functions, Successive differentiation, Leibnitz theorem, Taylor's and Maclaurin's theorem with various forms of remainders, Indeterminate forms.

Unit-III

De–Moivre's Theorem and its applications, circular and hyperbolic functions and their inverses.

Unit-IV

Exponential and Logarithmic function of a complex numbers, Expansion of trigonometric functions, Gregory's series, Summation of series.

Text Books:

1.George B.Thomas and Ross L.Finney: Calculus and Analytic Geometry, 9thedition, Addison Wesley,1998(Relevant portions related to Unit-I &II)

2..S.L.Loney: Plane trigonometry part -II(relevant portions related to Unit-III & IV) Cambridge university press.

Reference Books:

1.Erwin Kreyszig: Advanced Engineering Mathematics, John Wiley and Sons, 1999.

2.N. Piskunov: Differential and Integral Calculus, Peace Publishers, Moscow.

3.Gorakh Prasad: Differential Calculus, PothishalaPvt. Ltd., Allahabad.

Bachelor of Science (Economics)

Semester-I

Session: 2020-21

Course title: Quantitative Techniques (Quantitative Techniques–I)

Course Code: BECL-1453

Course Outcomes

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

CO 1: Solve linear equations of two variables and its applications in economics, under the quadratic equations, arithmetic progression, geometric progression and their applications in economics.

CO 2: Develop understanding of elements of analytical geometry, straight lines, basic concepts of trigonometry and permutations and combinations.

CO 3: Differentiate between a constant and a variable, graph of linear and quadratic functions and its applications in economics.

CO 4: 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-I

Session: 2020-21

Course title: Quantitative Techniques (Quantitative Techniques–I)

Course Code: BECL-1453

ExaminationTime: 3Hours

Max. Marks: 100
Theory :80
CA :20

Note: Instructions for the Paper–Setters/Examiners:

Eight questions of equal marks (16 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

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.

UNIT–II

Elements of Analytical Geometry: Straight line; Basic concepts of trigonometry (with formulae); Concepts of combination and permutation, Elements of set theory, union, intersection, difference, symmetric difference, complementation, Venn diagrams.

UNIT–III

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.

UNIT–IV

Derivatives of elementary functions excluding inverse trigonometric functions, Rules of derivatives; functions of functions rule; derivatives of implicit functions, parametric functions, logarithmic differentiation (Application in Economics).

Text Book:
R.S.Aggarwal: Mathematics for Economists
Reference Books:
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.
5.Chiang, A.C. (1986), Fundamental Methods of Mathematical Economics, McGraw Hill, New York

Bachelor of Science (Economics)

Semester-I

Session: 2020 -21

Course Code: BECM-1134

COMPUTER SCIENCE

(COMPUTER FUNDAMENTALS& PC SOFTWARE)

Course Outcomes:

After passing this course the student will be able to:

CO1: have knowledge of Computer components - hardware and software.

CO2: use computer system for general tasks at user level, including operative systems and programming environments.

CO3: gain knowledge on office automation software and recognize when to use a particular office program to create professional and academic documents.

Bachelor of Science (Economics)
Semester-I
Session: 2020 -21

Course Code: BECM-1134

COMPUTER SCIENCE

(COMPUTER FUNDAMENTALS & PC SOFTWARE)

(THEORY)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

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

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 & 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, CD, DVD.
Introduction to Windows based operating system and Desktop icons.

UNIT III

MS–Word: 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

MS-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/Textbooks:

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 Science (Economics)

Semester-I

Session: 2020 -21

Course Code: BECM-1134

COMPUTER SCIENCE

(COMPUTER FUNDAMENTALS & PC SOFTWARE)

(PRACTICAL)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

Practical based on Windows, MS Word, MS PowerPoint.

Bachelor of Science (Economics)
Semester-I
Session: 2020 -21
Course Code: BECM-1124

COMPUTER APPLICATION (VOCATIONAL)

(COMPUTER FUNDAMENTALS & PC SOFTWARE)

Course Outcomes:

After passing this course the student will be able to:

CO1: gain knowledge about various generations of computers.

CO2: understand the functionalities of hardware and software parts of the computer system.

CO3: make use of computer as per the need.

CO4: use and configure essential office applications including word processing, spreadsheets etc.

Bachelor of Science (Economics)
Semester-I
Session: 2020 -21
Course Code: BECM-1124

COMPUTER APPLICATION (VOCATIONAL)

(COMPUTER FUNDAMENTALS & PC SOFTWARE)

(THEORY)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

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

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 & 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

MS–Word: 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

MS-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/Textbooks:

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

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

Bachelor of Science (Economics)
Semester-I
Session: 2020 -21
Course Code: BECM-1124

COMPUTER APPLICATION (VOCATIONAL)

(COMPUTER FUNDAMENTALS & PC SOFTWARE)

(PRACTICAL)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

Practical based on Windows, MS Word, MS PowerPoint.

Bachelor of Science (Economics)
(Semester–I)
Session: 2020 -21
Course Code: BECL-1175
Microeconomics

Course Outcomes:

CO: After passing this course students will be able to **have** an In-depth grounding in the preliminary concepts and theories in consumer behavior, cost and market structure and production behavior.

Bachelor of Science (Economics)
(Semester–I)
Session 2020-21
Course Code: BECL-1175
MICROECONOMICS

Time: 3 Hours **Max. Marks: 100**
Theory: 80
CA: 20

Note: Instructions for the Paper–Setters:
Two questions, each carrying 16 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.

UNIT–I

Introductory: Definition of Economics, Nature and Scope 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: Traditional and modern cost Theory, Concepts and Costs curves in the short and in the long run. Revenue Curves and their relationship with elasticity of demand.

UNIT–III

Market forms: Perfect Competition; Assumptions, Price and output determination of firm and Industry in 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 of interest; classical theory, lonable funds theory.

Profit: Concept of profit; Risk and uncertainty theories.

Books Recommended:

1. D.N. Dwivedi,*" Microeconomics -Theory and Applications",* Pearson Education Pvt. Ltd.
2.H. L. Ahuja," *Advanced Economic Theory"*, S. Chand, publications New Delhi.
3. Koutsoyiannis A., "*Modern Micro Economics",* 2nd edition, MacMillan House, New Delhi.
4.Stonier&Hague,A,"*Text book of Economics Theory*", 9th ed., ELBS, London.

Bachelor of Science (Economics)
(Semester–I)
Session: 2020 -21

Drug Abuse: Problem, Management and Prevention (COMPULSORY)

Course Code: AECD-1161

(Theory)

Time: 3 Hrs **Max. Marks: 50**
Theory: 40
CA: 10

Instructions for the 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 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

Meaning of Drug Abuse: Meaning, Nature and Extent of Drug Abuse in India and Punjab.

UNIT-II

Consequences of Drug Abuse for:

Individual : Education, Employment, Income.
Family : Violence.
Society : Crime
Nation : Law and Order problem.

UNIT-III

Management of Drug Abuse

Medical management : medication for treatment and to withdrawal effects.

UNIT-IV

Psychiatric Management: Counselling, Behavioural and Cognitive therapy.
Social Management: Family, Group therapy and Environmental Intervention.

Suggested readings:

1. Ahuja, Ram (2003), *Social Problems in India*, Rawat Publication, Jaipur.

2. Extent, Pattern and Trend of Drug Use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.

3. Inciardi, J.A. 1981. *The Drug Crime Connection.*Beverly Hills: Sage Publications.

4. Kapoor. T. (1985) *Drug epidemic among Indian Youth*, New Delhi: Mittal Pub.

5. Modi, Ishwar and Modi, Shalini (1997) *Drugs: Addiction and Prevention*, Jaipur: Rawat Publication.

6. National Household Survey of Alcohol and Drug abuse. (2003) New Delhi, Clinical Epidemiological Unit, All India Institute of Medical Sciences, 2004.

7. Sain, Bhim 1991, *Drug Addiction Alcoholism,* Smoking obscenity New Delhi: Mittal Publications.

8. Sandhu, Ranvinder Singh, 2009, *Drug Addiction in Punjab*: A Sociological Study. Amritsar: Guru Nanak Dev University.

9. Singh, Chandra Paul 2000. *Alcohol and Dependence among Industrial Workers*: Delhi: Shipra.

10. Sussman, S and Ames, S.L. (2008). *Drug Abuse: Concepts, Prevention and Cessation,* Cambridge University Press.

Bachelor of Science (Economics)
(Semester–I)
Session: 2020 -21

FOUNDATION COURSE

Course Title: Foundation Course

Course Duration: 30 hours

Course intended for: Semester I students of undergraduate degree programmes of all streams.

Course Credits: 1

Course Code: SECF-1492

PURPOSE & AIM

This course has been designed to strengthen the intellectual foundation of all the new entrants in the college. One of the most common factors found in the students seeking admission in college after high school is the lack of an overall view of human history, knowledge of global issues, peaks of human intellect, social/political benchmarks and inventors & discoverers who have impacted human life. For a student, the process of transformation from school to college is full of apprehension and intimidation of the system. The Foundation Programme intends to bridge the gap between high school and college education and develop an intellectual readiness and base for acquiring higher education.

INSTRUCTIONAL OBJECTIVES

• to enable the students to realise their position in the whole saga of time and space

• to inculcate in them an appreciation of life, cultures and people across the globe

• to promote, in the students, an awareness of human intellectual history

• to make them responsible and humane world citizens so that they can carry forward the rich legacy of humanity

CURRICULUM

MODULE	TITLE	CONTACT HOURS
I	**Introduction & Initial Assessment**	**2**
II	**The Human Story**	**3**
III	***The Vedas*, *The Gita* & Eastern Philosophy**	**2.5**
IV	***The Holy Bible* & Genesis**	**2.5**
V	**Woman: A Journey through the Ages**	**2.5**
VI	**Changing Paradigms in Society, Religion & Literature**	**2.5**
VII	**Makers of Modern India**	**2.5**
VIII	**Racism & Martin Luther King Jr.**	**2.5**
IX	**Modern World at a Glance: Political & Economic Perspective**	**2.5**
X	**Technology & Human Life**	**2.5**
XI	**The KMV Experience**	**2.5**
XII	**Final Assessment, Feedback & Closure**	**2.5**

EXAMINATION

- Total Marks: 25 (Final Exam: 20; Internal Assessment: 5)
- Final Exam: multiple choice quiz**.** Marks – 20; Time: 1 hour

• Internal Assessment: 5 (Assessment: 3; Attendance:2)

Comparative assessment questions (medium length) in the beginning and close of the programme. Marks: 3; Time: 0.5 hour each at the beginning and end.

• Total marks: 25 converted to grade for final result

• Grading system: 90% marks & above: A grade

80% - 89% marks : B grade
70% - 79% marks : C grade
60% - 69% marks : D grade
50% - 59% marks : E grade
Below 50% marks : F grade (Fail - must give the exam again)

SYLLABUS

Module I Being a Human: Introduction & Initial Assessment
• Introduction to the programme

• Initial Assessment of the students through written answers to a couple of questions

Module 2 The Human Story
• Comprehensive overview of human intellectual growth right from the birth of human history

• The wisdom of the Ancients

• Dark Middle Ages

• Revolutionary Renaissance

• Progressive modern time

• Most momentous turning points, inventions and discoveries

Module 3 *The Vedas*, *The Gita* & The Indian Philosophy

• Origin, teachings and significance of *The Vedas*

• Upnishads and Puranas

• Karma Theory of *The Bhagwad Gita*

• Main tenets of Buddhism & Jainism

• Teachings of Guru Granth Sahib

Module 4 *The Holy Bible* & Genesis
• Book of Genesis: Creation and Fall

- Noah's Ark
- Moses &The Ten Commandments
- Christ and His teachings
- Christianity and the world

Module 5 Changing Paradigms in Society, Religion & Literature

- Renaissance: The Age of Rebirth
- Transformation in human thought
- Importance of humanism
- Geocentricism to heliocentricism
- Copernicus, Galileo, Columbus, Darwin and Saint Joan
- Empathy and Compassion

Module 6 Woman: A Journey through the Ages

- Status of women in pre-vedic times
- Women in ancient Greek and Roman civilizations
- Women in vedic and ancient India
- Status of women in the Muslim world
- Women in the modern world
- Crimes against women
- Women labour workforce participation
- Women in politics
- Status of women- our dream

Module 7 Makers of Modern India

- Early engagement of foreigners with India
- Education: The first step to modernization
- Railways: The lifeline of India
- Raja Ram Mohan Roy, Gandhi, Nehru, Vivekanand, Sardar Patel etc.
- Indira Gandhi, Mother Teresa, Homai Vyarawala etc.
- The Way Ahead

Module 8 Racism: Story of the West

- European beginnings of racism
- Racism in the USA - Jim Crow Laws
- Martin Luther King Jr. and the battle against racism
- Apartheid and Nelson Mandela
- Changing face of racism in the modern world

Module 9 Modern World at A Glance: Political & Economic Perspective

- Changing world order
- World War I & II
- UNO and The Commonwealth
- Nuclear Powers; Terrorism
- Economic Scenario: IMF, World Bank
- International Regional Economic Integration

Module 10 Technology and Human Life

- Impact of technology on modern life
- Technological gadgets and their role in our lives
- Technology and environment
- Consumerism and materialism
- Psychological and emotional consequences of technology
- Harmonising technology with ethics and humaneness

Module 11 The KMV Experience

- Historical Legacy of KMV
- Pioneering role in women emancipation and empowerment
- KMV Contribution in the Indian Freedom Struggle
- Moral, cultural and intellectual heritage of KMV
- Landmark achievements
- Innovative initiatives; international endeavours
- Vision, mission and focus
- Conduct guidelines for students

Module 12 Final Assessment, Feedback & Closure

- Final multiple choice quiz
- Assessment through the same questions asked in the beginning

- Feedback about the programme from the students
- Closure of the programme

PRESCRIBED READING

- ***The Human Story*** published by Dawn Publications

Kanya Maha Vidyalaya, Jalandhar (Autonomous)
SCHEME AND CURRICULUM OF EXAMINATIONS OF THREE YEAR DEGREE PROGRAM

Bachelor of Science (Economics)

Session: 2020-21

Bachelor of Science (Economics) Semester II									
Course Code		**Course Name**			**Course Type**	**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	50	40 / -	10	3
BECL-2212		English (Compulsory)			C	50	40 / -	10	3
BECM-2333		**Mathematics**	I	Calculus and Differential Equations	E	100	80 (40+40) / -	20	3+3
			II	Calculus					
BECL-2453		**Quantitative Techniques** (Quantitative Techniques-II)			E	100	80 / -	20	3
BECM-2134		**Computer Science** (Programming in C)			E	100	50 / 30	20	3+3
	(P)	**Computer Science** (Programming in C) (PRACTICAL)							
BECM-2124		**Computer Applications (Vocational)**(Programming Using C)			E	100	50 / 30	20	3+3
	(P)	**Computer Applications (**Programming Using C) (PRACTICAL)							
BECL-2175		**Economics**(Macroeconomics)			C	100	80 / -	20	3
AECD-2161		*Drug Abuse: Problem Management and Prevention (Compulsory)			AC	50	40 / -	10	3
SECM-2502		*Moral Education			AC	25	20 / -	5	1
Total						**400**			

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–II
PUNJABI (COMPULSORY)
COURSE CODE-BECL-2421

COURSE OUTCOMES:

CO1:Y or (eUT7h GTr) w gVTA7 YT YwoE ftfYNToEhN? NYo eft7T g7h fYWuAgh, AM w gYT eowT U 7? fe AU NTOfwe Yo ftu uZW oUhN? eTft OToTt? N7 ethN? pTo frNTw UTfAW eo Ae7I

CO2:fTA YT Uo YwoE eft7T Yh ftNTfyNT, ftPWP7 7 YWe7 Yh gfefoNT 7A KT7 eoTA7T th U 7? fe AU AYeTWh AYTK YhN? AYZfANTt? w AYM Ae7 N7 NTWuwT7Ye fYPNh p7T Ae7I

CO3:AATo YhN? gfAO UA7hN? Khtwh Yh ftOT w fAWpA ftu PTfYW eo e ftfYNToEhN? NYo Khtwh w gV7 Yh ouh w gYT eowT U N7 Khtwh Kr7 wTW KV7T UI

CO4:PpY p77o N7 PpY ouwT gV7 wTW ftfYNToEh fTAY YZYW AeWg? w NTOTo p7T e fTUw? AeWg? 7A KT7 U7r I

CO5:PpY P7hN? w gVTA7 YT YwoE ftfYNToEhN? NYo gKTph GTPT Yh NYhoh YT N7 pTohehN? w AYM7 WTh tZyo - tZyo fAO?7? YT fteTA eowT UI

CO6:YUTtfoN? Yh to7A wTW rZWpT7 ftu gogZe7T NTAAYh UIfTU ftfYNToEhN? Yh rZWpT7 ftu fwyTo fWNTA7 YT eY eowrI

BACHELOR OF SCIENCE (ECONOMICS) SEMESTER–II
PUNJABI (COMPULSORY)
COURSE CODE-BECL-2421
AY?: S xN Maximum Marks: 50

Theory: 40
CA: 10

gTO eY N7 gTO gA7e?

:fwN-I
Y or (eUT7h GTr) (AgT. UofKYo fAx fYWA N7 gh7Y fAx AorOhNT),ro wTwe Yt :whtofANh, NfY7Aol
(ਿਦਸ਼ਾ-ਦਸਤ$ATo)**8 Ne**

:fwN-II
AATo YhN? gfAZO UA7hN? (Khtwh w: 10 7A18 7e)(AgT. fg. 7KT fAx, UowTY fAx PTY), gKTph ATfU7 geTPw, NfY7Aol

(ਿਦਸ਼ਾ/ਸਾਰ)**8 Ne**

:fwN-III
(A) PpY p77o N7 PpY ouwT : gfoGTPT, YZYW AeWgl
(N) PpY P7hN? 8 Ne

:fwN-IV
(A) Y|7oh fuZOh gZ7o
(N) YUTto 8 Ne

Ne tv N7 gohfyNe WTh UYTfT7?
1. **gPw gZ7o Y uTo AePw U7rlAePw A-D 7Ze Y gPw :fwN I-IV ftuA gZS KT7rl Uo AePw ftu Y gPw gZS KT7rl**
2. **ftfYNToEh w eW gK gPw eow Uwl Uo AePw ftuA fTe gPw WT!Yh Ul gKt? gPw feA th AePw ftuA eh7T KT AeYT Ul**
S. **Uoe gPw Y 08 Ne Uwl**
4. **ggo AZN eow tTWT Keo uTU 7? gPw? Yh tv NZrA tZO 7A tZO uTo Ag gPw? ftu eo AeYT Ul**

BACHELOR OF SCIENCE (ECONOMICS) SEMESTER–II
BASIC PUNJABI
In lieu of Punjabi (Compulsory)
COURSE CODE: BECL-2031

Course outcomes:

CO1:YZYWh gKTph gVTA7 YT YwoE ftfYNToEhN? w gKTph GTPT w fAyTA7 Yh gfefoNT ftu gT e fTe Uo GTPT fAZy7 Y Ye gYTw eowT UI

CO2:fTA ftu ftfYNToEh w pTohephwh wTW GTPT YT NfONw eotTfTNT KTtrTI

CO3:ftfYNToEhN? w gKTph PpY ouwT 7A KT7 eotTfTNT KTtrTI

CO4:PpY P7hN? w gVTA7 YT YwoE ftfYNToEhN? NYo gKTph GTPT Yh NYhoh YT N7 pTohehN? w AYM7 WTh tZyo - tZyo fAO?7? YT fteTA eowT UI

CO5:YZYWh gKTph gVTA7 YT YwoE ftfYNToEhN? YT PpY xoT ftPTW eowT UI

CO6:ftfYNToEh tTe Yh gfoGTPT N7 fTAYh p77o 7A KT7 U7r N7 GTPT 7 geV YKp7 Utrh I

CO7:goT ouwT YT YwoE ftfYNToEhN? Yh pZOh w 7hy7 eofYN? Aw? Yh fWy7 gf7GT w AKTro eowT UI

CO8: Ayg ouwT eow wTW ftfYNToEh NTg7h rZW w Ayg ftu efU7 Yh KTu fAZy7r N7 fTU fYYTrh eAo7 ftu AUTTh Utrh I

CO9:xoW N7 Y|7oh fuZOh gZ7o fWy7 YT YwoE ftfYNToEhN? w fTA eWT ftu fwgw eowT UI

CO10:YUTtfoN? Yh to7A wTW rZWpT7 ftu gogZe7T NTAAYh UIfTU ftfYNToEhN? Yh rZWpT7 ftu fwyTo fWNTA7 YT eY eowrI

BACHELOR OF SCIENCE (ECONOMICS) SEMESTER–II

BASIC PUNJABI

In lieu of Punjabi (Compulsory)

COURSE CODE: BECL-2031

smW: 3 Gt **Maximum Marks: 50**

Theory : 40

CA 10

gTO eY

:fwN-I

PpY P7hN? : gST7 N7 to7A (w?t, gVw?t, fefoNT, ftPP7, fefoNT ftPP7, ApOe, :Ke N7 ftAfYe)

08 Ne

:fwN-II

gKTph tTe p77o : YZYWh KT7 gST7

(A) ATOTow tTe, A:e7 tTe N7 fYPo7 tTe (gST7 N7 to7A)

(N) fpNTwhNT tTe, gPwtTue tTe N7 UeYh tTe (gST7 N7 to7A)

08 Ne

:fwN-III

goT ouwT

Ayg ouwT **08 Ne**

:fwN-IV

fuZOh gZ7o (xoW N7 Y|7oh)

YUTto **08 Ne**

Ne tv N7 gohfyNe WTh UYTfT7?

1. **gPw gZ7o Y uTo AePw U7rIAePw A-D 7Ze Y gPw :fwN I-IV ftuA gZS KT7rI Uo AePw ftu Y gPw gZS KT7rI**
2. **ftfYNToEh w eW gK gPw eow UwI Uo AePw ftuA fTe gPw WT!Yh UI gKt? gPw feA th AePw ftuA eh7T KT AeYT UI**
3. **Uoe gPw Y 08 Ne UwI**
4. **ggo AZN eow tTWT Keo uTU 7? gPw? Yh tv NZrA tZO 7A tZO uTo Ag gPw? ftu eo AeYT UI**

Bachelor of Science (Economics) (Semester –II)
Session 2020-21
Course Title: Punjab History and Culture (C. 320 to 1000 B.C.)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)
Course Code: BECL-2431

COURSE OUTCOMES

After completing Semester II and course on Ancient History of Punjab, students of History will be able to identify and have a complete grasp on the sources & writings of Ancient History of Punjab

CO 1: Analyse the emergence of Mauryan, Gupta empires during the classical age in India

CO 2: To understand the various factors leading to rise and fall of empires and emergence of new dynasties and their Culture, society, administration , polity and religion specifically of Kushans and Vardhanas in the Punjab

CO 3: Students will be adept in constructing original historical argument based on primary source material research

CO 4: To have an insight on the existing Literature of this period and understand the past developments in the light of present scenario.

CO 5: To enable students to have thorough insight into the various forms/styles of Architecture and synthesis of Indo - Muslim Art and Architecture in Punjab

Bachelor of Science (Economics) (Semester –II)
Session 2020-21
Course Title: Punjab History and Culture (C. 320 to 1000 B.C.)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)
Course Code: BECL-2431

Examination Time: 3 Hours **Max. Marks: 50**
Theory: 40
CA: 10

Instructions for the Paper Setter:

5. Question paper shall consist of four Units
6. Examiner shall set 8 questions in all by selecting Two Questions of equal marks from each Unit.
7. Candidates shall attempt 5 questions in 600 words, by at least selecting One Question from each Unit and the 5th question may be attempted from any of the four Units.
8. Each question will carry 8 marks

Unit-I

1. Alexander's Invasion's and Impact
2. Administration of Chandragupta Maurya and Ashoka.

Unit-II

3. The Kushans: Gandhar School of Art .
4. Gupta Empire: Golden period (Science , Art and Literature)

Unit-III

5. The Punjab under the Harshvardhana
6. Socio-cultural History of Punjab from 7th to 1000 A.D.

Unit-IV

7. Development of Languages and Education with Special reference to Taxila
8. Development to Art and Architecture

Suggested Readings

1. L. M Joshi (ed), *History and Culture of the Punjab*, Art-I, Punjabi University, Patiala, 1989 (3rd edition)
2. L.M. Joshi and Fauja Singh (ed.), *History of Punjab* , Vol.I, Punjabi University, Patiala, 1977.
3. Budha Parkash, *Glimpses of Ancient Punjab*, Patiala, 1983.
4. B.N. Sharma: *Life in Northern India*, Delhi. 1966.

Bachelor of Science (Economics) (Semester –II)
Session 2020-21
ENGLISH (COMPULSORY)
Course Code: BECL-2212

COURSE OUTCOMES:

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

CO1: appreciate the writings of various Indian and foreign story and prose writers and relate them to their socio-cultural milieu

CO2:comprehend the meaning of texts and answer questions related to situations, episodes, themes and characters depicted in them

CO3: change the narration and voice of sentences after understanding fundamental grammatical rules governing them

CO4: enrich their vocabulary and use new words in their spoken and written language

CO5:independently write personal letters to their family and friends on various issues

Bachelor of Science (Economics) (Semester –II)
Session 2020-21
ENGLISH (COMPULSORY)
Course Code: BECL-2212

Max. Marks: 50
Examination Time: 3 Hrs **Theory: 40**
CA: 10

Instructions for the Examiner:
The question paper will consist of 4 sections & distribution of marks will be as under:
Section A: The question will be set from Unit I of the syllabus. Fifteen sentences will be set and the students would be required to attempt any ten. Each sentence will carry one mark. **(10x1=10)**

Section B: Two questions will be set from Unit II of the syllabus. The students would be required to attempt one personal letter out of the given two. It will carry five marks (word limit 150 words). The second question will be based on vocabulary. The students would be required to write Antonyms or Synonyms for given words choosing any 5 out of 8 and each carrying one mark. **(2x5=10)**

Section C: This section will be divided into two parts. Two questions will be set from Unit III of the syllabus. Part one will have one essay type question with internal choice carrying six marks (word limit 300 words). The students would be required to attempt any one. The second part will have three questions. The students would be required to attempt any two. Each question will carry two marks (50 words each). **(6+2x2=10)**

Section D: This section will be divided into two parts. Two questions will be set from Unit IV of the syllabus. Part one will have one essay type question with internal choice carrying six marks (word limit 300 words). The students would be required to attempt any one. The second part will have three questions. The students would be required to attempt any two. Each question will carry two marks (50 words each). **(6+2x2=10)**

Unit I

English Grammar in Use, 4th Edition by Raymond Murphy, CUP (Units: 42-52, 69-81)

Unit II

Personal letter Writing and *The Students' Companion* (Section 9: Antonyms and Synonyms)

Unit III

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

Unit IV

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

Texts Prescribed:

1. *English Grammar in Use* (Fourth Edition) by Raymond Murphy, CUP
2. *The Students' Companion* by Wilfred D. Best
3. *Tales of Life* (Guru Nanak Dev University, Amritsar)
4. *Prose for Young Learners* (Guru Nanak Dev University, Amritsar)

Bachelor of Science (Economics) Semester–II
Session: 2020-21
Course Title: Mathematics (Calculus and Differential Equations)
Course Code: BECM-2333(I)

Course Outcomes:

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

CO 1: Demonstrate Asymptotes, points of inflexion, multiple points on a curve & also to differentiate between concavity and convexity & hence tracing of curve.

CO 2: Understand the concept of linear differential equation with constant and variable coefficients & also the exact differential equations & to apply in a wide variety of disciplines like Bio, Eco, Physics& Engineering.

CO 3: Demonstrate the geometrical meaning of a differential equation & the orthogonal trajectories.

CO 4: Manage to solve the problem related to series solution of differential equations like Bessel and Legendre equation by Power series method.

CO 5: Apply reduction formula on different functions & to develop the concept of variation of parameter.

Bachelor of Science (Economics) Semester–II
Session: 2020-21
Course Title: Mathematics (Calculus and Differential Equations)
Course Code: BECM-2333(I)

Examination Time: 3 Hours

Max.Marks:50
Theory :40
CA:10

Instructions for the 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 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

Asymptotes, Tests for concavity and convexity, Points of inflexion, Multiple Points, Curvature, Tracing of Curves (Cartesian and Parametric coordinates only).

Unit-II

Integration of hyperbolic functions.Reduction formulae.Definite integrals.Fundamental theorem of integral calculus.Quadrature, rectification.

Unit– III

Exact differential equations. First order and higher degree equations solvable for x,y,p. Clairaut's form and singular solutions. Geometrical meaning of a differential equation.Orthogonal trajectories.

Unit-IV

Linear differential equations with constant and variable coefficients.Variation of Parameters method, reduction method, series solutions of differential equations. Power series method, Bessel and Legendre equations (only series solution).

Text Books:

1.Om P.Chug, Parmanand Gupta, R.S.Dahiya: Topics in Mathematics: Calculus and Differential Equations, Laxmi Publications Private Ltd.

Reference Books:

1. D.A. Murray: Introductory Course in Differential Equations. Orient Longman (India), 1967.
2. G.F. Simmons: Differential Equations, Tata McGraw Hill, 1972.
3. Gorakh Prasad: Integral Calculus, PothishalaPvt. Ltd., Allahabad.
4. Erwin Kreyszig: Advanced Engineering Mathematics, John Wiley and Sons, 1999. 52

Bachelor of Science (Economics) Semester–II
Session: 2020-21
Course Title: Mathematics (Calculus)
Course Code: BECM-2333(II)

Course Outcomes:

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

CO 1: Understand the concept of Double and Triple integrals, & application to evaluation of areas, volumes, surfaces of solid of revolution and to apply to find out area and volume of plane and solid figure.

CO 2: Differentiate between limit and continuity of function of two variables and apply this concept in partial derivatives & differentiability of real valued function of two variables.

CO 3: Manage to solve problems related to Maxima, Minima & Saddle points of functions of two variables.

CO 4: Classify Envelopes & Evolutes, Application of inverse & implicit function theorems.

Bachelor of Science (Economics) Semester–II
Session: 2020-21
Course Title: Mathematics (Calculus)
Course Code: BECM-2333(II)

Examination Time: 3 Hours

Max.Marks:50
Theory :40
CA:10

Instructions for the 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 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

Limit and Continuity of functions of two variables, Partial differentiation, Change of variables, Partial derivatives and differentiability of real–valued functions of two variables, Schwartz's and Young's Theorem, Statements of Inverse and implicit function theorems and applications.

Unit-II

Euler's theorem on homogeneous functions, Taylor's theorem for functions of two variables, Jacobians, Envelopes.Evolutes, Maxima, Minima and saddle points of functions of two variables.

Unit-III

Lagrange's undetermined multiplier method, Double and Triple Integrals, Change of variables, Change of order of integration in double integrals.

Unit-IV

Application to evaluation of area, volume, surface of solids of revolutions.

Text Book:

1.George B. Thomas and Ross L. Finney: Calculus and Analytic Geometry, 9th Edition, Addison Wesley, 1998

Reference Books:

1. Narayan, S. and P.K. Mittal: Integral Calculus. Sultan Chand & Sons.
2. Kreyszig, E.: Advanced Engineering Mathematics.
3. Narayan S. and P.K. Mittal : Differential Calculus, Sultan Chand & Sons.

Bachelor of Science (Economics) (Semester –II)
Session: 2020-2021
Course Code: BECL-2453
QUANTITATIVE TECHNIQUES–II

Course Outcomes:

After passing this course, students will be able to:

CO1: understand the basic concepts and techniques for analyzing data.

CO2: develop statistical approach and thinking among students to problem solving on a diverse variety of disciplines.

CO3: understand the concept of time series in analyzing economics problems.

Bachelor of Science (Economics) (Semester –II)
Session 2020-21
Course Code: BECL-2453
QUANTITATIVE TECHNIQUES–II

Time: 3 Hours **Max. Marks: 100**
Theory: 80
CA: 20

Note: Instructions for the Paper–Setters:
Two questions, each carrying 16 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, Diagramatic and Graphical representation of data.
Introduction to SPSS- Defining variables and Entering data.

UNIT–II

Concepts and Measures of Central Tendency: Mean, 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, Paasche and Fisher's Formulae, Tests of Consistency.
Analysis of Time Series: Definition, Components of Time Series, Measurement of Trend bydifferent methods, Measurement of Seasonal Variations (stress on examples).

Books Recommended:

1. Gupta.S.P. (2014) ; Statistical Methods, SultanChand& Sons, New Delhi.
2. DN Elhance (2018)
3. Croxton, F.E. Cowden D.J. and Klein, S. (1973); Applied General Statistics, 3rd. Ed., Prentice Hall of India, New Delhi.
4. Nagar, A.L. and Das, R.K. (1976); Basic Statistics, Oxford University Press, Bombay.
5. Aggarwal, C.S and R.C Joshi.

Bachelor of Science (Economics) Semester- II
(Session 2020-21)
Course Code: BECM-2134

COMPUTER SCIENCE
(PROGRAMMING IN C)

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend different programming constructs involved in C programming.

CO2: Design symbolic representation of a problem and its solution through tools like algorithms, flowcharts, etc.

CO3: Design and control the execution of a program.

CO4: Apply programming concepts to provide solution for problems associated with different problem domains.

CO5: Identify storage classes associatedwith variables.

Bachelor of Science (Economics) Semester- II
(Session 2020-21)
Course Code: BECM-2134

COMPUTER SCIENCE
(PROGRAMMING IN C)
(THEORY)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

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

Data Representation, Introduction to Number Systems and Character Codes, Flow Charts, Problem Analysis, decision tables, pseudo codes and, algorithms.

UNIT–II

Programming Using C:

Basics of 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.

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

UNIT–III

Control Statements: Jumping, Branching and Looping–Entry controlled and exit controlled, Advantages/Disadvantages of loops, difference between for, while and do–while.

Arrays: Types of Arrays, One Dimensional and Two-Dimensional Arrays.

Strings: Introduction to Strings and String functions, array of strings.

UNIT-IV

Functions: User Defined & Library Function, Function (Prototype, Declaration, Definition), Methods of passing arguments, local and global functions, Recursion.

Storage Classes: Introduction to various storage classes, scope and lifetime of a variable,Storage class specifiers (auto, register, static, extern), advantages and disadvantages.

Structure and Union: Introduction to structure and union, pointers with structure.

References/Textbooks:

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 Science (Economics) Semester- II
(Session 2020-21)
Course Code: BECM-2134

COMPUTER SCIENCE
(PROGRAMMING IN C)
(PRACTICAL)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

Practical based on Programming in C

Bachelor of Science (Economicsi) Semester II
(Session 2020-21)
COURSE CODE: BECM-2124

COMPUTER APPLICATION (VOCATIONAL)
(PROGRAMMING USING C)

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend different programming constructs involved in C programming.

CO2: Design symbolic representation of a problem and its solution through tools like algorithms, flowcharts, etc.

CO3: Design and control the execution of a program.

CO4: Apply programming concepts to provide solution for problems associated with different problem domains.

CO5: Identify storage classes associated with variables.

Bachelor of Science (Economicsi) Semester II
(Session 2020-21)
COURSE CODE: BECM-2124

COMPUTER APPLICATION (VOCATIONAL)
(PROGRAMMING USING C)
(THEORY)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

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

Data Representation, Flow Charts, Problem Analysis, Decision tables, Pseudo codes and Algorithms.

Programming Using C:

Basics of 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, Advantages/Disadvantages of loops, difference between for, while and do–while.

UNIT-III

Arrays: Types of Arrays, Advantages/Disadvantages of arrays. Insertion, Deletion, Searching and sorting operations on array

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, Storage class specifiers (auto, register, static, extern), advantages and disadvantages.

Pointers: Introduction, Advantages/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/Textbooks:

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 Science (Economicsi) Semester II
(Session 2020-21)
COURSE CODE: BECM-2124

COMPUTER APPLICATION (VOCATIONAL)

(PROGRAMMING USING C)
(PRACTICAL)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

Lab based on Programming Using C

Bachelor of Science (Economics) (Semester –II)
Session 2020-21 Course
Code: BECL-2175
MACRO ECONOMICS

Course Outcomes:

After passing this course students will be able to:

CO1: understand the consumption and investment behavior of an economy and factor affecting consumption and investment decisions.

CO2: demonstrate an understanding of nature and functions of money and the role of financial markets in the economy.

CO3: To discuss the instruments of money and capital market in India

CO4: understand the problem of inflation, its causes, effects and solutions in an economy.

Bachelor of Science (Economics) (Semester –II)
Session 2020-21 Course
Code: BECL-2175
MACRO ECONOMICS

Time: 3 Hours **Max. Marks: 100**
Theory: 80
CA: 20

Note: Instructions for the Paper–Setters:
Two questions, each carrying 16 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.

UNIT–I

Distinction between Micro and Macro Economics; Determination of Income and Employment: Classical and Keynesian models; Say's Law of Market and aggregate demand and aggregate supply. 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 decision. 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.

Recommended Texts:
1. Shapiro E., *Macroeconomic Analysis, Harcourt, Brach and World*, New York.
2. Dwivedi D.N., *Macroeconomics: Theory and Policy*, Tata McGraw-Hill.

Bachelor of Science(Economics) (Semester –II)
Session 2020-21
Course Title: DRUG ABUSE:Problem, Management and Prevention (COMPULSORY)
Course Code: AECD-2161
Time: 3 Hrs Max. Marks: 50

Theory: 40
CA: 10

Instructions for the 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 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

Prevention of Drug abuse: Role of family: Parent child relationship,Family support,Supervision, Shaping values, Active Scrutiny.

UNIT-II

School: Counselling, Teacher as role-model. Parent-teacher-Health Professional coordination, Random testing on students.

UNIT-III

Controlling Drug Abuse: Media: Restraint on advertisements of drugs, advertisements on bad effects of drugs, Publicity and media, Campaigns against drug abuse, Educational and awareness program

UNIT-IV

Legislation: NDPs act, Statutory warnings, Policing of Borders, Checking Supply/Smuggling of Drugs,Strict enforcement oflaws, Time bound trials.

References:

1. Ahuja, Ram (2003), Social Problems in India, Rawat Publication, Jaipur.
2. Extent, Pattern and Trend of Drug Use in India, Ministry of Social Justice and Empowerment,Government of India, 2004.
3. Inciardi, J.A. 1981. The Drug Crime Connection. Beverly Hills: Sage Publications.
4. Kapoor. T. (1985) Drug epidemic among Indian Youth, New Delhi: Mittal Pub.
5. Modi, Ishwar and Modi, Shalini (1997) Drugs: Addiction and Prevention, Jaipur: Rawat Publication.
6. National Household Survey of Alcohol and Drug abuse. (2003) New Delhi, Clinical EpidemiologicalUnit, All India Institute of Medical Sciences, 2004.
7. Sain, Bhim 1991, Drug Addiction Alcoholism, Smoking obscenity New Delhi: Mittal Publications.
8. Sandhu, Ranvinder Singh, 2009, Drug Addiction in Punjab: A Sociological Study. Amritsar: Guru NanakDev University.
9. Singh, Chandra Paul 2000. Alcohol and Dependence among Industrial Workers: Delhi: Shipra.
10. Sussman, S and Ames, S.L. (2008). Drug Abuse: Concepts, Prevention and Cessation, CambridgeUniversity Press

Bachelor of Science (Honours) Mathematics Semester–II
Session 2020-21
Course title: Moral Education
Course duration: 30 hours
Course code: SECM-2502

Course Objectives:

1. To sensitize students about the role and importance of human values and ethics in personal, social and professional life.
2. To enable students to understand and appreciate ethical concerns relevant to modern lives.
3. To prepare a foundation for appearing in various competitive examinations.
4. To sensitize the students about the current issues and events of national and international importance.
5. To highlight plausible implications of ethical human conduct, trustful and mutually fulfilling human behaviour and mutually enriching interaction with nature.

Course Contents:

Introduction to Moral Education
Need , content and purpose
Vedic values
Character building

The Self and You

Understanding the Self –Self awareness, fighting the five evils (lust, anger, attachment, ego and greed), Self growth.
Personal ethics
Aspiration v/s ambition, self- seeking v/s selflessness
Physical and mental health

The Family and You

Importance of family- the basic unit of human interaction.
Generation gap
Relationship with siblings and elders

The Society and You

Social responsibility
Our rights and duties
Civic sense
Opposite sex relations
Globalization and IT boom – cellphone menace
Peer pressure
Gender issues

The Nation and You

International peace and brotherhood
Saving the environment
Communal harmony, Tolerance, Understanding of Cultures
Respect for Martyrs
National Pride

KanyaMaha Vidyalaya, Jalandhar (Autonomous)
SCHEME AND CURRICULUM OF EXAMINATIONS OF THREE-YEAR DEGREE PROGRAM
Bachelor of Science (Economics)
Session: 2020-2021

Bachelor of Science (Economics) Semester III									
Course Code		**Course Name**			**Course Type**	**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	50	40 / -	10	3
BECL-3212		English (Compulsory)			C	50	40 / -	10	3
BECM-3333		**Mathematics**	I	(Analysis)	E	100	80 (40+40) / -	20	3+3
			II	(Analytical Geometry)					
BECL-3453		**Quantitative Techniques** (Quantitative Techniques-III)			E	100	80 / -	20	3
BECM-3134		**Computer Science** (Computer Oriented Numerical And Statistical Methods)			E	100	50 / 30	20	3+3
	(P)	**Computer Science** (Computer Oriented Numerical And Statistical Methods) (PRACTICAL)							
BECM-3124		**Computer Applications (Vocational)** (Operating System)			E	100	50 / 30	20	3+3
	(P)	**Computer Applications (**Operating System (PRACTICAL)							
BECL-3175		**Economics** (Indian Economy)			C	100	80 / -	20	3
AECE-3221		*Environmental Studies (compulsory)			AC	100	60 / 20	20	3
SECG-3532		* Gender Sensitization			AC	25	20 / 10	5	1
Total						**400**			

E-Elective, O-Optional
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–III)
Session: 2020 -21
PUNJABI (COMPULSORY)

COURSE CODE- BECL -3421

COURSE OUTCOMES

CO1: u7t gKTph fwpO w gVTA7 YT YwoE ftfYNToEhN? NYo ਵਾਰਤਕg7hfYWuAgh, AMw gYT eowT U▌

CO2: 'AY? Yr eoYT U' fTe?rh ArfU w fAWpA ftu PTfYW eo e ftfYNToEhN? NYo fTe?rh gV7 Yh ouh w gYT eowT U N7 fTA ATfU7 og wTW wTW KV7T U▌

CO3:Ayg ouwT eow wTW ftfYNToEh NTg7h rZW w Ayg ftu efU7 Yh KTu fAZy7r N7 fTU fYYTrh eAo7 ftu AUTTh Utrh▌

CO4: Wy ouwT YT YwoE ftfYNToEhN? Yh pZOh w 7hy7 eofYN? Aw? Yh fWy7 gf7GT w AKTro eowT U▌

CO5:YW ftNTeo7e fTeTThN? : gfoGTPT N7 twrhN? (GTtP, PpY, tTeP, AgtTe N7 tTe)w gVTA7 YT YwoE ftfYNToEhN? NYo GTPT Yh NYhoh N7 pTohehN? w AYM7 WTh tZyo - tZyo fAO?7? YT fteTA eowT U▌

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
PUNJABI (COMPULSORY)

COURSE CODE- BECL -3421

AY? : S xN **Maximum Marks: 50**

Theory: 40

CA: 10

gTO eY N7 gTO gA7e?

:fwN-I

u7t gKTph fwpO (KfrYo fAx gNTo,goYKh7 fAx fAZO), gKTph :whtofANh,gfNNTWT▌

xo YT fgNTo, AYo WYh U AeYh U,NZEo, goT7T gKTp, fTrWkv YT Arh AYtTo,fyvTohN? Y tfUY▌

(gTOeY YT fUZAT Uw)

(ftPT tA7/ATo) 8 Ne

:fwN-II

AY? Yr eoYT U (fTe?rh ArfU) (ਸਪ◌ਾ. ਲਪ◌ਾਲ◌ੀਵ◌ਾਲ) u7wT geTPw,WfONT7T▌
ਕਵ
(ftPT tA7 /ATo)8 Ne

:fwN-III

(A) Ayg ouwT (gAh)

(N) Wy ouwT **8 Ne**

:fwN-IV

YW ftNTeo7e fTeTThN? : gfoGTPT N7 twrhN? (GTtP, PpY, tTeP, AgtTe N7 tTe)

8 Ne

Ne tv N7 gohfyNe WTh UYTfT7?

1. **gPw gZ7o Y uTo AePw U7rlAePw A-D 7Ze Y gPw :fwN I-IV ftuA gZS KT7rl Uo AePw ftu Y gPw gZS KT7rl**
2. **ftfYNToEh w eW gK gPw eow Uwl Uo AePw ftuA fTe gPw WT!Yh Ul gKt? gPw feA th AePw ftuA eh7T KT AeYT Ul**
3. **Uoe gPw Y 08 Ne Uwl**
4. **ggo AZN eow tTWT Keo uTU 7? gPw? Yh tv NZrA tZO 7A tZO uTo Ag gPw? ftu eo AeYT Ul**

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
Basic Punjabi (In lieu of Punjabi Compulsory)

COURSE CODE- BECL -3031

Course outcomes

CO1:ivAwkrxk iekwelA\ w gVTA7 YT YwoE ftfYNToEhN? NYo gKTph GTPT Yh NYhoh YT N7 pToheN? w AYM7 WTh tZyo - tZyo fAO?7? YT fteTA eowT N7 gKTph GTPT w fAyTA7 Yh gfefoNT ftu gT e fTe Uo GTPT fAZy7 Y Ye gYTw eowT UI

CO2:goT ouwT Y7 YT YwoE ftfYNToEhN? Yh pZOh w 7hy7 eofYN? Aw? Yh fWy7 gf7GT w AKTro eowT UI

CO3:xoW N7 Y|7oh fuZOh gZ7o fWy7 YT YwoE ftfYNToEhN? w fTA eWT ftu fwgw eowT UI

CO4:NyT7 N7 YUTtfoN? Yh to7A wTW rZWpT7 ftu gogZe7T NTAAYh UIfTU ftfYNToEhN? Yh rZWpT7 ftu fwyTo fWNTA7 YT eY eowrI

CO5: goT gV e gPw? Y AZ7o Y7 YT YwoE ftfYNToEhN? Yh pZOh w 7hy7 eofYN? Aw? Yh fWy7 gf7GT w AKTro eowT UI

CO6:Ayg ouwT eow wTW ftfYNToEh NTg7h rZW w Ayg ftu efU7 Yh KTu fAZy7r N7 fTU fYYTrh eAo7 ftu AUTTh UtrhI

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
Basic Punjabi (In lieu of Punjabi Compulsory)

COURSE CODE- BECL -3031

smW: 3 Gt **Maximum Marks : 50**

Theory : 40

CA : 10

gTO eY

:fwN-I

ivAwkrxk iekwelAW dI pCwx Aq vrqW; vwkS, apvwk Aq vwk

:fwN-II

geToKh gKTph : goT ouwT,fuZOh gZ7o

:fwN-III

I.NyT7

II.YUTto

:fwN-IV

I.goT ADwirq pSn

II.sKp rcnw

Ne tv N7 gohfyNe WTh UYTfT7?

1. **gPw gZ7o Y uTo AePw U7rIIAePw A-D 7Ze Y gPw :fwN I-IV ftuA gZS KT7rI Uo :fwN ftuA Y gPw gZS KT7rI**
2. **ftfYNToEh w eZW gK gPw eow UwI Uo GTr ftuA fTe gPw WT!Yh UI gKt? gPw feA th GTr ftuA eh7T KT AeYT UI**
3. **Uoe gPw Y NZO Ne UwI**
4. **ggo AZN eow tTWT Keo uTU 7? gPw? Yh tv NZrA tZO 7A tZO uTo Ag-gPw? ftu eo AeYT UI**

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
COURSE TITLE: PUNJAB HISTORY AND CULTURE (FROM 1000-1605 A. D.)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)

COURSE CODE: BECL-3431

Course outcomes

After completing the paper the students will have a thorough insight into the origin of Sikh faith and its major institutions in Punjab

CO 1: To able to construct original historical arguments using a blend of primary and secondary source material

CO 2: To be able to demonstrate the significance of historical topics with reference to broader historical context and their contemporary relevance

CO 3: Students will develop an ability to convey verbally their historical knowledge

CO 4: Students will *develop skills in critical thinking and reading*

CO 5: *To discuss understand and evaluate causes and results of the conflict with Mughals*

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
COURSE TITLE: PUNJAB HISTORY AND CULTURE (FROM 1000-1605 A. D.)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)

COURSE CODE: BECL-3431

Examination Time: 3 Hours **Max. Marks: 50**
Theory: 40
CA: 10

Instructions for the Paper Setters

9. Question paper shall consist of four Units
10. Examiner shall set 8 questions in all by selecting **Two Questions** of equal marks from each Unit.
11. Candidates shall attempt **5 questions** in **600 words**, by at least selecting **One Question** from each Unit and the **5th question** may be attempted from any of the **four Units**.
12. Each question will carry 8 marks

Unit -1.

1. Society and Culture of Punjab during Turko - Afghan Rule

2. The Punjab under the Mughals

Unit-II:

3. Bhakti Movement and Impact on Society of Punjab

4. Sufism in Punjab

Unit-III:

5. Guru Nanak:Early Life and Teachings

6. Concept of Sangat, and Pangat

Unit-IV:

7. Contribution of Guru Angad Dev, Guru Amar Das and Guru Ram Das

8. Guru Arjun Dev and Compilation of Adi Granth

Suggested Readings:

- **Chopra, P. N., Puri, B.N., &Das. M.N. (1974). A Social, Cultural and Economic History of India, Vol. II. New Delhi : Macmillan India.**
- **Grewal, J.S. (1994) The Sikhsof the Punjab, Cambridge University Press, New Delhi.**
- **Singh, Fauja (1972), A History of the Sikhs, Vol. II,I. Patiala: Punjabi University.**
- **Singh, Khuswant (2011). A History of Sikhs- Vol. I (1469-1839), New Delhi:Oxford University Press.**

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
ENGLISH (COMPULSORY)
Course Code: BECL-3212

COURSE OUTCOMES

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

CO 1: develop an understanding of the poems taught, relate to the socio-cultural background of England and be able to answer questions regarding tone, style and central idea

CO 2: comprehend the basics of grammatical rules governing relative clauses, adjectives, adverbs, conjunctions and prepositions

CO 3: enhance their reading and analysing power of texts through guided reading

CO 4: enrich their vocabulary and use new words in their spoken and written language

CO 5: develop skills to write an essay on a given topic

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
ENGLISH (COMPULSORY)
Course Code: BECL-3212

Max. Marks: 50
Examination Time: 3 Hrs **Theory: 40**
CA: 10

Instructions for the Examiner:

(The paper setters should avoid questions of theoretical nature from *Making Connections*.)

Section A: One question with sub-parts will be set from Unit I of the syllabus. Fifteen sentences will be set and the students would be required to attempt any ten. Each sentence will carry one mark. **(10x1=10)**

Section B: Two questions will be set from Unit II of the syllabus. The students would be required to attempt one essay out of the given two topics carrying six marks (word limit 300 words). The second question will be based on vocabulary. The students would be required to write single words for phrases and sentences choosing any four out of six and each carrying one mark. **(1x6+4x1=10)**

Section C: The students would be required to attempt two questions (with sub parts) based on exercises as given before and after reading essays in the prescribed text book *Making Connections*. **(2×5=10)**

Section D: This section will be divided into two parts. In part one, three questions based on central idea, theme, tone and style etc. of the poems from the prescribed textbook, *Moments in Time* from Unit IV of the syllabus will be set. The students would be required to attempt any two, each carrying three marks (100 words each). **(2×3=6)**

Part two will have one question (with internal choice) requiring students to explain a stanza with reference to context carrying four marks (word limit 200 words). The stanzas for explanation will be taken from the prescribed textbook, *Moments in Time* from Unit IV in the syllabus. **(1×4=4)**

Unit I

English Grammar in Use, 4th Edition by Raymond Murphy, CUP (Units 92-120)

Unit II

Essay Writing and *The Students' Companion* by Wilfred D. Best (Section 1: Single words for phrases and sentences: Words denoting Numbers and words denoting Places)

Unit III

Making Connections by Kenneth J. Pakenham, 2nd Edn. CUP: Unit-II

Unit IV

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

Texts Prescribed:

1. *English Grammar in Use* (Fourth Edition) by Raymond Murphy, CUP

2. *The Students' Companion* by Wilfred D. Best
3. *Making Connections* by Kenneth J. Pakenham, 2nd Edn. CUP
4. *Moments in Time: An Anthology of Poems*, GNDU, Amritsar

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
Course Title: Mathematics (Analysis)

Course Code: BECM-3333(I)

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 and series.

CO 2: To understand the concepts of Riemann sum, partitions, upper and lower sums, Riemann integrability of continuous functions and of monotone functions.

CO 3: To know and describe the converging behavior of improper integrals and Beta , Gamma functions.

CO 4: Distinguish between the absolute convergence and conditional convergence.

CO 5: To find the relation between Beta and Gamma functions.

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
Course Title: Mathematics (Analysis)
Course Code: BECM-3333(I)

Examination Time : 3 hrs.
Max.Marks:50
Theory:40

CA:10

Instructions for the 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 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

Definition of a sequence.Theorems on limits of sequences.Bounded and monotonic sequences.Cauchy's convergence criterion.

Unit-II

Series of non-negative terms.Comparison tests.Cauchy's integral tests.Ratio tests.Cauchy's root test.Raabe's test, logarithmic test.Demorgan's and Bertrand's tests.Kummer's test, Cauchy Condensation test, Gauss test, Alternating series. Leibnitz's test, absolute and conditional convergence.

Unit-III

Partitions, Upper and lower sums.Upper and lower integrals, Riemann integrability.Conditions of existence of Riemann integrability of continuous functions and of monotone functions.Algebra of integrable functions.

Unit-IV

Improper integrals and statements of their conditions of existence. Test of the convergence of improper integral, beta and gamma functions.

Text Book:
Ajit Kumar and S. Kumaresan : A Basic Course in Real Analysis, CRC Press

Reference Books:
1. Malik, S.C.: Mathematical Analysis, Wiley Eastern Ltd. (1991).
2. Apostal, T.M.: Mathematical Analysis, Addison Wesley Series in Mathematics (1974).

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
Course Title: Mathematics (Analytical Geometry)
Course Code: BECM -3333(II)

Course Outcomes

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

CO 1: Understand the concept of the geometry of lines and conics in the Euclidian plane.

CO 2: Develop geometry with a degree of confidence and will gain fluency in the basics of Euclidian geometry.

CO 3: Sketch conic sections; identify conic sections, their focal properties and classifications.

CO 4: Demonstrate the concept of parabola, ellipse, hyperbola, sphere and the general quadratic equation.

CO 5: Understand the concept of coordinate geometry on a wider scale with the help of shifting of origin and rotation of axis.

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21

Course Title: Mathematics (Analytical Geometry)

Course Code: BECM -3333(II)

Examination Time : 3 hrs. Max.Marks:50
Theory:40
CA:10

Instructions for the 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 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

Transformation of axes, shifting of origin, Rotation of axes in two dimension and three dimension, the invariants, Joint equation of pair of straight lines, equations of bisectors

Unit-II

Parabola and its properties. Tangents and normal, Pole and polar, pair of tangents at a point, Chord of contact, equation of the chord in terms of mid point and diameter of conic.

Unit-III

Ellipse and hyperbola with their properties.Tangents and normal, Pole and polar.pair of tangents at a point, Chord of contact, Identifications of curves represented by second degree equation (including pair of lines).

Unit-IV

Intersection of three planes, condition for three planes to intersect in a point or along a line or to form a prism. Sphere: Section of a sphere by a plane, spheres of a given circle. Intersection of a line and a sphere.Tangent line, tangent plane, power of a point with respect to a sphere, radical planes.

Text Book:

S.L. Loney: The Elements of Coordinate Geometry, Macmillan and Company, London.

Reference Books:

1. Gorakh Prasad and H.C. Gupta: Text Book on Coordinate Geometry.
2. Narayan, S and P.K.Mittal.: Analytical Solid Geometry, Sultan Chand & Sons (2005).
3. Kreyszig, E.: Advanced Engineering Mathematics.
4. Thomos, G.B. and Finney, R.L.: Calculus and Analytic Geometry.

Bachelor of Science (Economics)

(Semester –III)

Session 2020-21

Course Code: BECL-3453

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 the economics concepts like consumer and producer surplus.

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

Co4: understand the basics of Linear programming.

Bachelor of Science (Economics)

(Semester –III)
Session 2020-21
Course Code: BECL-3453
QUANTITATIVE TECHNIQUES–III

Time: 3 Hours **Max. Marks: 100**
Theory: 80
CA: 20

Note: Instructions for the Paper–Setters/Examiners:
Two questions, each carrying 16 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.

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.

Recommended Texts:

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

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
Course Code: BECM-3134

COMPUTER SCIENCE

(COMPUTER ORIENTED NUMERICAL AND STATISTICAL METHODS)

Course Outcomes:

After passing this course the student will be able to:

CO1: Understand numerical methods, nonlinear equations, interpolation methods and Simultaneous Solution of Equations.

CO2: Learn about Interpolation and Curve Fitting and Numerical differentiation.

CO3: Learn Correlation, Regression, Bivariate & Multivariate distribution and Interpretation of Trend Analysis.

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
Course Code: BECM-3134

COMPUTER SCIENCE

(COMPUTER ORIENTED NUMERICAL AND STATISTICAL METHODS)

(THEORY)

Examination Time: (3+3) Hrs. **Max. Marks: 100**
Theory: 50
Practical: 30
CA: 20

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. The students can use Non–programmable/ scientific & Non–storage type calculator.

Unit –I

Introduction:

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

Unit -II

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

Unit -III

6. Measure of Central Tendency, Preparing frequency distribution table, Mean Arithmetic, Mean Geometric, Mean Harmonic, Mean, Median and Mode.
7. Measure of dispersion, Range, Mean deviation, Standard deviation, co-efficient of variation, Moments, Skewness, Kurtosis.

Unit –IV

8. Correlation, Bivariate Distribution, Multivariate distribution.
9. Regression B.C., Linear Regression.

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 Science (Economics)
(Semester–III)
Session: 2020 -21
Course Code: BECM-3134

COMPUTER SCIENCE

(COMPUTER ORIENTED NUMERICAL AND STATISTICAL METHODS)

(PRACTICAL)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

Practical based on Computer Oriented Numerical and Statistical Methods.

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
COURSE CODE: BECM-3124

COMPUTER APPLICATIONS (VOCATIONAL)
(OPERATING SYSTEM)

Course Outcomes:

After passing this course the student will be able to:

CO1: Understand the basic knowledge of operating system, its types and functions.

CO2: Have knowledge of Unix operating system and its uses.

CO3: Gain knowledge about piping, filters, batch processing, shell programming and vi editors.

Bachelor of Science (Economics)
(Semester–III)
Session: 2020 -21
COURSE CODE: BECM-3124

COMPUTER APPLICATIONS (VOCATIONAL)
(OPERATING SYSTEM)
(THEORY)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

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 & Multiprogramming, Functions of Operating System, Booting a System, Language Processors: Compiler, Assembler, Interpreter, Linker and Loader.

1. CPU Scheduling (For First come First serve, Shortest Job First, Priority, Round Robin Scheduling).

UNIT-II

2. Memory Management (Logical address space and physical address space, schemes).

3. File Management.

4. I/O Device Management.

5. Data Management.

6. Security.

UNIT-III

Introduction to Unix**,** Features and Benefits of Unix, Components of Unix (Kernel, Shell), UNIX file system (Data Block, list, super block, boot block), Types of Files (Ordinary, Directory and Special Files), Login and Logout from Unix Session, Types of Shells (Bourne, c-shell, Korn-shell), Shell as a command interpreter.

UNIT–IV

Simple Directory and File Commands Cat, is, in, chmod, mail, who, whoami, cal, pwd, date, ps, mkdir, cd, rmdir, rm, tput, clear. Piping, filters, shell programming (echo, read, case constructs)

Editors (vi): Commands for opening, inserting, modifying, deleting and saving files.

References/Textbooks:

1. Avi Silberschatz, 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 Science (Economics)
(Semester–III)
Session: 2020 -21
COURSE CODE: BECM-3124

COMPUTER APPLICATIONS (VOCATIONAL)
(OPERATING SYSTEM)
(PRACTICAL)

Practical based on UNIX.

Bachelor of Science (Economics) (Semester –III)
Session 2020-21
Course Code: BECL-3175
Economics (Indian Economy)

Course Outcomes:

After passing this course students will be able to:

CO1: understand the Indian development strategies and dynamics of problems of different sectors of Indian Economy

CO2: understand latest developments in social, agriculture, industry and external sector in India.

Bachelor of Science (Economics) (Semester –III)
Session 2020-21
Course Code: BECL-3175
Economics (Indian Economy)

Time: 3 Hours **Max. Marks: 100**
Theory: 80
CA: 20

Note: Instructions for the Paper–Setter:

Two questions, each carrying 16 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.

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).

Suggested Readings:

1. Mishra, S.K. and Puri, V.K. (2019), "*Indian Economy",* Himalaya Publication House, Mumbai.
2. Dutt, R. and Sundharam, *K.P.M.* (2018), "*Indian Economy",* S. Chand & Co. Ltd., New Delhi.
3. Aggarwal, A. N. (1975), "*Indian Economy",* Vikas Publishing House, Delhi.
4. Wadhwa, C. D. (1980), "*Indian Economic Policy",* Tata McGraw Hill, Bombay.

Note: The latest edition of the books is recommended.

Bachelor of Science (Economics)
(Semester –III)
Session 2020-21
Environmental studies (COMPULSORY PAPER)
Course Code: AECE-3221
(Theory)

COURSE OUTCOMES

After passing this course the student will be able to:

- CO1 Demonstrate and Understand the ecological relationships between organisms and their environment.
- CO2 Present an overview of diversity of life forms in an ecosystem.
- CO3 Explain and identify the role of the organism in energy transfers.
- CO5 Understand the Environmental Pollution and their management.
- CO6Understanding and awareness for wildlife conservation.
- CO7Knowledge of conservation of threatened animal species

Bachelor of Science (Economics)
(Semester –III)
Session 2020-21
Environmental studies (COMPULSORY PAPER)
Course Code: AECE-3221

(Theory)

Time: 3 Hours. **Max. Marks: 100**
Theory: 60
Field Report:20
CA: 20

Instructions for the Paper Setter:

The question paper should carry 60 marks.

The structure of the question paper being:

Part-A, Short answer pattern – 20 marks

Attempt any five questions out of seven. Each question carries 4 marks. Answer to each question should not exceed 2 pages

Part-B, Essay type with inbuilt choice – 40 marks

Attempt any five questions out of eight. Each question carries 8 marks. Answer to each question should not exceed 5 pages.

Unit 1

The multidisciplinary nature of environmental studies

Definition, scope and importance, Need for public awareness

Unit 2

Natural Resources: Renewable and non-renewable resources:

Natural resources and associated problems.

(a) Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.

(b) Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.

(c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.

(d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.

(e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies.

(f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.

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

Unit 3

Ecosystems

- Concept of an ecosystem
- Structure and function of an ecosystem
- Producers, consumers and decomposers
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids
- Introduction, types, characteristic features, structure and function of the following ecosystem: Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)

Unit 4

Biodiversity and its conservation

- Introduction – Definition: genetic, species and ecosystem diversity
- Biogeographical classification of India
- Value of biodiversity: consumptive use, productive use, social, ethical aesthetic and option values
- Biodiversity at global, national and local levels
- India as a mega-diversity nation
- Hot-spots of biodiversity
- Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts
- Endangered and endemic species of India
- Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity

Unit 5

Environmental Pollution

Definition

- Causes, effects and control measures of Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear pollution
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution
- Pollution case studies
- Disaster management: floods, earthquake, cyclone and landslides

Unit 6

Social Issues and the Environment

- From unsustainable to sustainable development
- Urban problems and related to energy
- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people; its problems and concerns. Case studies.
- Environmental ethics: Issues and possible solutions
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
- Wasteland reclamation
- Consumerism and waste products
- Environmental Protection Act, 1986
- Air (Prevention and Control of Pollution) Act, 1981
- Water (Prevention and control of Pollution) Act, 1974
- Wildlife Protection Act
- Forest Conservation Act

- Issues involved in enforcement of environmental legislation
- Public awareness

Unit 7

Human Population and the Environment

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

Unit 8

Field Work

- Visit to a local area to document environmental assets river/forest/grassland/hill/mountain
- Visit to a local polluted site – Urban / Rural / Industrial / Agricultural
- Study of common plants, insects, birds
- Study of simple ecosystems-pond, river, hill slopes, etc

References:

1. Bharucha, E. 2005. Textbook of Environmental Studies, Universities Press, Hyderabad.

2. Down to Earth, Centre for Science and Environment, New Delhi.

3. Heywood, V.H. &Waston, R.T. 1995. Global Biodiversity Assessment, Cambridge House, Delhi.

4. Joseph, K. &Nagendran, R. 2004. Essentials of Environmental Studies, Pearson Education (Singapore) Pte. Ltd., Delhi.

5. Kaushik, A. & Kaushik, C.P. 2004. Perspective in Environmental Studies, New Age International (P) Ltd, New Delhi.

6. Rajagopalan, R. 2011. Environmental Studies from Crisis to Cure. Oxford University Press, New Delhi.

7. Sharma, J. P., Sharma. N.K. & Yadav, N.S. 2005. Comprehensive Environmental Studies, Laxmi Publications, New Delhi.

8. Sharma, P. D. 2009. Ecology and Environment, Rastogi Publications, Meerut.

9. State of India's Environment 2018 by Centre for Sciences and Environment, New Delhi

10. Subramanian, V. 2002. A Text Book in Environmental Sciences, Narosa Publishing House, New Delhi

Bachelor of Science (Economics)

(Semester-III)

Session 2020-21

Course Title: Gender Sensitization Programme

Course Duration: 30 Hours

Course Code: SECG- 3532

(Theory)

The program has been designed to inculcate value of gender equality among students so that they can identify the areas of
gender discrimination and raise their voice against gender discrimination and work towards making the society gender neutral.

INSTRUCTIONAL OBJECTIVES:

1. To sensitize students about gender rights, gender roles and relations.
2. To make students aware and capable of realizing their true potential.
3. To ensure equal participation of men and women in all economic, social and political processes.
4. To develop gender prospective to transform the mind set of society.

Examination Time: 2 Hours **Max Marks: 25**

MODULE	TITLE	HOURS
1	Introduction and Initial Assessment	2 Hrs
2	Workshop in Self Defense Techniques	10 Hrs
3	Open House (An Inter-active Session)	2 Hrs
4I	Cultural Roles and Gender Sensitivity	2 Hrs
4II	Gender Concerns in Leadership and Political Participation	2 Hrs
4III	Gender Dimensions in Economic Participation and wage Gap	2 Hrs
4IV	Gender Rights: Constitutional Rights & Legal Rights	2 Hrs
4V	Social problems and Ethos : Gender Prospective with focus on Indian Society	2 Hrs
4VI	Gender Issues and Health care system	2 Hrs
4VII	Champions of Gender Equality from Punjab Or Voices On Gender Equality From Punjab	2 Hrs
5	Final Assessment Feedback and Closure	

EXAMINATION
Total Marks: 25 (Workshop in Self Defense Techniques :10 marks ; Multiple Choice Quiz. / Project – 10 marks ; Internal Assessment: 5)
Internal Assessment: 5 Marks (Assessment Feedback : 3 marks; Attendance : 2 marks)
Total marks: 25 converted to grade for final result

Grading system:
90% marks & above: A grade
80% - 89% marks : B grade
70% - 79% marks : C grade
60% - 69% marks : D grade
50% - 59% marks : E grade
Below 50% marks : F grade (Fail - must give the exam again)

Kanya Maha Vidyalaya, Jalandhar (Autonomous)
SCHEME AND CURRICULUM OF EXAMINATIONS OF THREE YEAR DEGREE PROGRAM

Bachelor of Science (Economics)

Session: 2020-21

Bachelor of Science (Economics) Semester IV									
Course Code		**Course Name**			**Course Type**	**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	50	40 / -	10	3
BECL-4212		English (Compulsory)			C	50	40 / -	10	3
BECM-4333		**Mathematics**	I	Statics and Vector Calculus	E	100	80 (40+40) / -	20	3+3
			II	Solid Geometry					
BECL-4453		**Quantitative Techniques** (Quantitative Techniques-IV)			E	100	80 / -	20	3
BECM-4134		**Computer Science** (Data Structures and Programming Language Using C++)			E	100	50 / 30	20	3+3
	(P)	**Computer Science** (Data Structures and Programming Language Using C++) (PRACTICAL)							
BECM-4124		**Computer Applications (Vocational)** (Relational Database Management Systems and Oracle)			E	100	50 / 30	20	3+3
	(P)	**Computer Applications (**Relational Database Management Systems and Oracle) (PRACTICAL)							
BECL-4175		**Economics (**International Economics and Public Finance)			C	100	80 / -	20	3
SECS-4522		*Social Outreach			AC	25	/ 20	5	
Total						**400**			

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 IV
Session 2020-21
ENGLISH (COMPULSORY)
Course Code: BECL-4212

COURSE OUTCOMES:

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

CO 1: develop an understanding of the poems taughtand be able to answer questions regarding situations, themes and characters depicted in them

CO 2: comprehend the basics of grammatical rules governing prepositions and phrasal verbs

CO 3: enhance their reading and analysing power of texts through guided reading

CO 4: enrich their vocabulary and use newly learnt words in both spoken and written language

CO 5: develop skills to write an essay on a given topic

BACHELOR OF SCIENCE (ECONOMICS) - Semester IV
Session 2020-21
Punjabi (Compulsory)
COURSE CODE: BECL-4421

COURSE OUTCOMES

CO1: ‘grvvhN?’ (ਸਵਜ਼ੈ ੀਵਨ ੀ) w gVTA7 YT YwoE ftfYNToEhN? NYo ੀਵਨੀfTA ਸਵਜ

ATfU7 og g7hfYWuAgh, AM w gYT eowT UI

CO2: ‘ਫ਼ ਾਸਲੇ’ (ਨ ਾਟਕ) w fAWpA ftu PTfYW eo e ftfYNToEhN? NYo ਨ ਾਟਕw gV7 Yhouh w gYT eowT U N7 ਨ ਾਟਕKr7 wTW KV7T UI

CO3: Y|7oh fuZOh gZ7o fWy7 YT YwoE ftfYNToEhN? w fTA eWT ftu fwgw eowT U I

CO4: PpY KV? Y fw=Y w fAWpA ftu PTfYW eow YT YeAY ftfYNToEhN? YNToT fW\7 ftu eh7hN? KT7 tTWhN? rW7hN? w AOTowT UI

CO5: roYyh fWgh YhN? ftPP7Tt? w gVTA7 YT YwoE ftfYNToEhN? NYo gKTph GTPT Yh NYhoh YT N7 pToheN? w AYM7 WTh tZyo - tZyo fAO?7? YT fteTA eowT UI

BACHELOR OF SCIENCE (ECONOMICS) - Semester IV
Session 2020-21
Punjabi (Compulsory)
COURSE CODE: BECL-4421

AY? : S xN **Maximum Marks: 50**

Theory: 40
CA: 10

gTO eY N7 gTO gA7e?

:fwN-I

grvvhN? (ਸਵੈਜੀਵਨੀ) :
ਡਾ.pfu7 eo **(ATo /ftPT tA7)8 Ne**

:fwN-II

ਫ਼ਾਸਲੇ (ਨਾਟਕ) :Kf7Yo poTV,
ftPT tA7/ATo **8 Ne**

:fwN-III

Y|7oh fuZOh gZ7o 8 Ne

:fwN-IV

ftNTeo7

(A) PpY KV? Y fw:Y

(N) roYyh fWgh YhN? ftPP7Tt? **8 Ne**

Ne tv N7 gohfyNe WTh UYTfT7?

1. **gPw gZ7o Y uTo AePw U7rlAePw A-D 7Ze Y gPw :fwN I-IV ftuA gZS KT7rl Uo AePw ftu Y gPw gZS KT7rl**
2. **ftfYNToEh w eW gK gPw eow Uwl Uo AePw ftuA fTe gPw WT!Yh Ul gKt? gPw feA th AePw ftuA eh7T KT AeYT Ul**
3. **Uoe gPw Y 08 Ne Uwl**
4. **ggo AZN eow tTWT Keo uTU 7? gPw? Yh tv NZrA tZO 7A tZO uTo Ag gPw?**

ftu eo AeYT Ul

BACHELOR OF SCIENCE (ECONOMICS) SEMESTER–IV
SESSION 2020-21
Basic Punjabi (In lieu of Punjabi Compulsory)
COURSE CODE: BECL-4031

COURSE OUTCOMES:

CO1:'Yu xo' fTe?rh w fAWpA ftu PTfYW eo e ftfYNToEhN? NYo fTeTrh w gV7 Yh ouh w gYT eowT U N7 fTe?rh Kr7 wTW KV7T UI

CO2: niqk isiKAw nwI sbDq khwxIAW pVwax dw mnrQ ividAwrQIAW dI bDI n qIKx kridAW anW ivc smwjk smJ ajwgr krnw h[

CO3: ieSiqhwr iIKx dw mnrQ ividAwrQIAW n ies kIw ivc inpn krnw h[

CO4: ivAwkrn pVwax dw mnrQ ividAwrQIAW Adr pjwbI BwSw dI AmIrI dw Aq bwrIkIAW n smJx Iel vKr-vKr isDwqW dw ivkws krnw Aq pjwbI BwSw n isKwax dI pikirAw ivc pw k iek hr BwSw isKx d mk pdwn krnw h[

BACHELOR OF SCIENCE (ECONOMICS) Semester–IV
SESSION 2020-21
Basic Punjabi (In lieu of Punjabi Compulsory)
COURSE CODE: BECL-4031

smW: 3 Gt **Maximum Marks : 50**

Theory : 40
CA : 10

gTO eY

:fwN-I

Yu xo (fTe?rh AfrU) (AgT. eWYhg fAx Oho N7 fUoYKh7 fAx GrW), ro wTwe Yt :whtofANh, NfY7Aol
YKT ftNTU,Yw YhN? Yw ftu,pUY GK(fTe?rhN? fAWpA YT fUZAT Uw)
(ਸਾਰ)
08Ne

:fwN-II

niqk isiKAw nwl sbDq khwxlAW:
1. **Agr Kt hn**
2. **lwlc brI bllw h**
3. **ekqw ivc bl h**
4. **ijQ cwh, a~Q rwh**
5. **Aq Bl dw Bllw**

08Ne

:fwN-III

ieSiqhwr
1.vpwr sbDI
2.ivAwh sbDI
3.vsqAW dI ^rId–vc sbDI
4.AswmIAW dw ieSiqhwr
5.isiKAw pwpqI sbDI

08Ne

:fwN-IV

svr: svrW dI pirBwSw,svrW dw vrglkrn
ivAjn: ivAjnW dI pirBwSw,ivAjnW dw vrglkrn

08Ne

Ne tv N7 gohfyNe WTh UYTfT7?
1. **gPw gZ7o Y uTo AePw U7rlAePw A-D 7Ze Y gPw :fwN I-IV ftuA gZS KT7rl Uo AePw ftu Y gPw gZS KT7rl**
2. **ftfYNToEh w eZW gK gPw eow Uwl Uo AePw ftuA fTe gPw WT!Yh Ul gKt? gPw feA th AePw ftuA eh7T KT AeYT Ul**
S. **Uoe gPw Y 08 Ne Uwl**
4. **ggo AZN eow tTWT Keo uTU 7? gPw? Yh tv NZrA tZO 7A tZO uTo Ag gPw?**

ftu eo AeYT UI

Bachelor of Science (Economics) (Semester –IV)
Session 2020-21
Course Title: Punjab History & Culture (From 1605 To 1849 A.D.)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)
Course Code: BECL-4431

Course Outcomes:

After completing the paper the students will have a thorough insight into the origin of Sikh faith and its major institutions in Punjab

CO 1: To able to construct original historical arguments using a blend of primary and secondary source material

CO 2: To be able to demonstrate the significance of historical topics with reference to broader historical context and their contemporary relevance

CO 3: Students will develop an ability to convey verbally their historical knowledge

CO 4: students will *develop skills in critical thinking and reading*

CO 5: To discuss understand and evaluate causes and results of the conflict with Mughals

Bachelor of Science (Economics) (Semester –IV)
Session 2020-21
Course Title: Punjab History & Culture (From 1605 To 1849 A.D.)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)
Course Code: BECL-4431

Examination Time: 3 Hours **Max. Marks: 50**
Theory: 40
CA: 10

Instructions for the Paper Setters:

1. Question paper shall consist of four Units
2. Examiner shall set 8 questions in all by selecting Two Questions of equal marks from each Unit.
3. Candidates shall attempt 5 questions in 600 words, by at least selecting One Question from each Unit and the 5th question may be attempted from any of the four Units.
4. Each question will carry 8 marks

UNIT I

1. Transformation of Sikhism under Guru Hargobind.
2. Martydom of Guru Teg Bahadur

UNIT II

3. Creation of Khalsa
4. Khalsa and its impact on the Punjab

UNIT III

5. Banda Bahadur and his achievements
6. Rise of Misls.

UNIT IV

7. Maharaja Ranjit Singh:- Civil, Military and Land Revenue Administration.
8. Fair, Festivals and Folk Music in the Punjab during the medieval period (Jarag, Baisakhi and Diwali)

Suggested Readings:

1. Chopra P.N., Puri, B.N., & Das, M.N.(1974), *A Social, Cultural & Economic History of India.* Vol.II, Macmillan India Limited, New Delhi.
2. Grewal, J.S. (1994). *The Sikhs of the Punjab*, Cambridge University Press, New Delhi.
3. Singh, Fauja (1972). *A History of the Sikhs*, Vol. III, Patiala: Punjabi University.
4. Singh, Kushwant (2011). *A History of the Sikhs*- Vol. I (1469-1839). New Delhi: Oxford University Press.
5. Singh,Kirpal (1990). *History and Culture of the Punjab*-Part II (Medieval Period). Patiala: Publication Bureau, Punjabi University.

BACHELOR OF SCIENCE (ECONOMICS) Semester IV
Session 2020-21
ENGLISH (COMPULSORY)
Course Code: BECL-4212

Max. Marks: 50
Examination Time: 3 Hrs **Theory: 40**
CA: 10

Instructions for the Examiner:

The paper setters should avoid questions of theoretical nature from *Making Connections*.

Section A: One question with sub-parts will be set from Unit I of the syllabus. Fifteen sentences will be set and the students would be required to attempt any ten. Each sentence will carry one mark. **(10x1=10)**

Section B: Two questions will be set from Unit II of the syllabus. The students would be required to attempt one essay out of the given two topics carrying six marks (word limit 300 words). The second question will be based on vocabulary. The students would be required to write single words for phrases and sentences choosing any four out of six and each carrying one mark. **(1x6+4x1=10)**

SectionC: The students would be required to attempt two questions (with sub parts) based on exercises as given before and after reading essays in the prescribed text book *Making Connections*. **(2×5=10)**

Section D: This section will be divided into two parts. In part one, three questions based on central idea, theme, tone and style etc. of the poems from the prescribed textbook,*Moments in Time* from Unit IV of the syllabus will be set. The students would be required to attempt any two, each carrying three marks (100 words each).**(2×3=6)**

Part two will have one question (with internal choice) requiring students to explain a stanza with reference to context carrying four marks (word limit 200 words). The stanzas for explanation will be taken from the prescribed textbook, *Moments in Time* from Unit IV in the syllabus. **(1×4=4)**

Unit I

English Grammar in Use, 4th Edition by Raymond Murphy, CUP (Units 121-145)

Unit II

Essay Writing and *The Students' Companion* by Wilfred D. Best (Section 1: Single words for phrases and sentences: Words pertaining to Government, words pertaining to Marriage, Opposites and Negatives)

Unit III

Making Connections by Kenneth J. Pakenham, 2nd Edn. CUP: Unit-IV

Unit IV

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

Texts Prescribed:

1. *English Grammar in Use* (Fourth Edition) by Raymond Murphy, CUP
2. *The Students' Companion* by Wilfred D. Best
3. *Making Connections* by Kenneth J. Pakenham, 2nd Edn. CUP
4. *Moments in Time: An Anthology of Poems*, GNDU, Amritsar

Bachelor of Science (Economics) Semester–IV
Session: 2020-21
Course Title: Mathematics (Statics and Vector Calculus)
Course Code: BECM - 4333(I)

Course Outcomes:

After passing this course, the students will be able :

CO 1: To apply parallelogram law of forces, triangle law of forces, Lami's theorem to real life problems.

CO 2: To understand that how one can resolve number of coplanar forces, parallel forces and concurrent forces acting at a body.

CO 3: To find the moments of number of coplanar forces acting at a particle

CO 4: To find the resultant of a force and couple acting on a body.

CO 5: To find the applications of CG of a rod, triangular lamina, solid hemisphere, hollow hemisphere, solid cone and hollow cone.

CO 6: To find the values of gradient, divergence and curl operator of given vectors.

CO 7: To find the application of Gauss theorem, Green's theorem and Stokes's theorem in real life problems.

Bachelor of Science (Economics) Semester–IV
Session: 2020-21
Course Title: Mathematics (Statics and Vector Calculus)
Course Code: BECM - 4333(I)

Examination Time: 3 Hours

Max.Marks:50
Theory :40
CA:10

Instructions for the 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 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

Composition and resolution of forces(parallelogram law, triangle law, polygon law, Lami's Theorem,(ɜ-μ) theorem).Resultant of a number of coplanar forces, parallel forces. Moments ,Varignon's Theorem of moments, Couples , Resultant of two Coplanar Couples, Equilibrium of two coplanar couples, Resultant of a force and a couple, Equilibrium of coplanar forces.

Unit-II

Friction, Laws of friction, Equilibrium of a particle on a rough plane. Centre of Gravity: Centre of gravity of a rod, triangular lamina, solid hemisphere, hollow hemisphere, solid cone and hollow cone.

Unit-III

Vector differentiation, Gradient, divergence and curl operators, line integrals, Vector identity, and Vector integration.

Unit-IV

Theorems of Gauss, Green, Stokes and problems based on these.

Text Books:

1. N.P.Bali: Statics, Laxmi Publications (P) Ltd.
2. Spiegal,M.R.: Vector Analysis, Schaum's outline Series, McGraw Hill.

Reference Books:

1. S.L. Loney: Statics, Macmillan and Company, London.
2. R.S. Verma: A Text Book on Statics, Optical Pvt. Ltd., Allahabad.

Bachelor of Science (Economics) Semester–IV
Session: 2020-21
Course Title: Mathematics (Solid Geometry)
Course Code: BECM-4333(II)

Course Outcomes:

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

CO 1: Demonstrate the concept of cone, classification of cone, intersection of line and cone, reciprocal cone.

CO 2: Understand the concept of cylinder, enveloping cylinder and its limiting form.

CO 3: Describe the concept of conicoids or quadratic surface, its classification, trace different types of conicoids.

CO 4: Manage to find surface of revolution and concept of tangent and normal to the conicoid

CO 5: Identify the conicoids and representing it in the form of hyperboloid, ellipsoid, paraboloid.

Bachelor of Science (Economics) Semester–IV
Session: 2020-21
Course Title: Mathematics (Solid Geometry)
Course Code: BECM-4333(II)

Examination Time: 3 Hours **Max.Marks:50**
Theory :40
CA:10

Instructions for the 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 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

Cylinder as surface generated by a line moving parallel to a fixed line and through fixed curve.

Different kinds of cylinders such as right circular, elliptic, hyperbolic and parabolic in standard forms

Unit-II

Cone with a vertex at the origin as the graph of homogeneous equation of second degree in *x, y, z*. Cone as a surface generated by a line passing through a fixed curve and fixed point outside the plane of the curve. Right circular and elliptic cones.

Unit-III

Equation of surface of revolution obtained by rotating the curve $f(x,y)=0$ about the z-axis in the form of $f(x^2+y^2, z) =0$.Equation of ellipsoid, hyperboloid and Paraboloid in standard forms.

Unit-IV

Surfaces represented by general equation of 2nd degree $S = 0$. Tangent lines, tangent planes and Normal Plane.

Text Books:

1.P.K.Jain& Khalil Ahmed: A text book of Analytical Geometry of three dimensions, Wiley Eastern Ltd. 1999.

Reference Books:

1. Narayan, S &P.K.Mittal : Analytical Solid Geometry, Sultan Chand & Sons(2005)
2. Kreyszig, E : Advanced Engineering Mathematics

Bachelor of Science (Economics) (Semester –IV)
Session: 2020-2021
Course Code: BECL-4453
QUANTITATIVE TECHNIQUES–IV

Course Outcomes:

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

CO1: understand the axiomatic formulation of modern probability theory and think of random variables as intrinsic need for analysis of random phenomena.

CO2: recognize the connection between theory and applications by appropriately fitting, assessing and interpreting the results/ outcomes

CO3: understand the basic principles underlying survey design and estimation.

Bachelor of Science (Economics) (Semester –IV)
Session 2020-21
Course Code: BECL-4453
QUANTITATIVE TECHNIQUES–IV

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

Theory: 80

Internal Assessment: 20

Note: Instructions for the Paper–Setters:
Two questions, each carrying 16 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.

UNIT–I

Multiple Linear Regression: Concepts, Estimation and Applications (without derivations) of: 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), Stratified Random Sampling (applications only).

Books Recommended:

1. Gupta S.C., Fundamentals of Statistic, Himalaya Publishing House, 7th Edition,Delhi
2. Gupta S.P., Statistical Methods, Sultan Chand& Sons, 43rd Edition, Delhi
3. Spiegel, Andrew F, Practical Business Statistics, International Edition, 5th Edition, McGraw Hill Irwin.

Bachelor of Science (Economics) Semester- IV
(Session 2020-21)
Course Code: BECM-4134

COMPUTER SCIENCE
(DATA STRUCTURES & PROGRAMMING LANGUAGE USING C++)

Course Outcomes:
After passing course the student will be able to:

CO1: Write, compile and debug programs in C++, use different data types, operators and I/O function in a computer program.

CO2: Comprehend the concepts of Object-Oriented Programming Paradigm.

CO3: Comprehend various sorting and searching algorithms.

CO4: Implement the basic data structures and solve problems using fundamental algorithms.

CO5: Analyze complexity of algorithms to determine their efficiency.

Bachelor of Science (Economics) Semester- IV
(Session 2020-21)
Course Code: BECM-4134

COMPUTER SCIENCE
(DATA STRUCTURES & PROGRAMMING LANGUAGE USING C++)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

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.The students can use Non–programmable/ scientific & Non–storage type calculator.

UNIT–I

Data Structure: Introduction to elementary Data Organization, Common Operation on Data Structures, Algorithm Complexity, Big O Notation, Time-Space Tradeoff between Algorithm.

Arrays: Array Defined, Representing Arrays in memory, various operations on linear arrays, Multi-Dimensional arrays.

Linked Lists: Types of Linked Lists, representing linked list in memory, advantages of using linked lists over arrays, various operations of linked lists.

UNIT–II

Stacks: Description of stack structure, Implementation of stack, using arrays and linked lists, application of stack-converting Arithmetic expression from infix notational to polish and their subsequent evaluation, quicksort technique to sort an array.

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–III

Object Oriented Programming: Objects & Classes, Constructor & Destructor, Operator Overloading, overloading unary operators, overloading binary operators, Data conversion, Pitfalls of operator overloading and conversion.

UNIT-IV

Inheritance, Derived class and base class, Derived class constructor. Overloading member functions, Inheritance in the English distance class, class hierarchies, Public & Private

inheritance, Level of inheritance, Polymorphism, problems with single inheritance, multiple inheritance.

References/Textbooks:

1. Seymour Lipschutz, Data Structures, Schaum's Outline Series, McGraw Hill Company (2014) 1st edition (Revised).
2. Aaron M. Tenenbaum, Data Structures using C and C++, Pearson Education (2015), 2nd edition.
3. YashavantKanetkar, Data StrucutreThrough C++, BPB Publications (2003).
4. Varsha H. Patil, Data Structures Using C++,Oxford; Illustrated edition (2012).
5. R. S. Salaria, Data Structures and Algorithms Using C++, Khanna Publishing (2018), 3rd edition.
6. S.K. Srivastava and Deepali Srivastava, Data Structures through C, BPB Publications (2004)
7. YedidyahLangsam, Augestein and Tanenbaum, Data Structures using C and C++, Pearson Education India (2015), 2nd Edition

Bachelor of Science (Economics) Semester- IV
(Session 2020-21)
Course Code: BECM-4134

COMPUTER SCIENCE
(DATA STRUCTURES & PROGRAMMING LANGUAGE USING C++)
(PRACTICAL)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

Practical based on Data Structures & Programming Language Using C++

Bachelor of Science (Economics) Semester IV
(Session 2020-21)
COURSE CODE: BECM-4124

COMPUTER APPLICATIONS (VOCATIONAL)
(RELATIONAL DATA BASE MANAGEMENT SYSTEMS AND ORACLE)

Course Outcomes:

After passing this course the student will be able to:

CO1: Illustrate the concept of database normalization and its various forms.

CO2: Apply SQL to design basic to intermediate level of databases.

CO3: Identify the importance of security in database management system.

CO4: Comprehend the concept of PL/SQL and its relationship with SQL.

Bachelor of Science (Economics) Semester IV
(Session 2020-21)
COURSE CODE: BECM-4124

COMPUTER APPLICATIONS (VOCATIONAL)
(RELATIONAL DATA BASE MANAGEMENT SYSTEMS AND ORACLE)

(THEORY)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

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 10g: Introduction to Oracle
Data Types: Char, numbers, date long, raw, long raw.
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: Roll back, 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, Trune, 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 & Sub query, Union, Intersection, Minus, Views, Security amongst users.

UNIT IV

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

References/Textbooks:

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 Science (Economics) Semester IV
(Session 2020-21)
COURSE CODE: BECM-4124

COMPUTER APPLICATIONS (VOCATIONAL)
(RELATIONAL DATA BASE MANAGEMENT SYSTEMS AND ORACLE)

(PRACTICAL)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

Practical based on Relational Data Base Management System & ORACLE

Bachelor of Science (Economics) (Semester –IV)

Session 2020-21

Course Code: BECL-4175

INTERNATIONAL ECONOMICS AND PUBLIC FINANCE

Course Outcomes:

After passing this course students will be able to:

CO1: be able to understand the concept, structure, disequilibrium causes and measures through which disequilibrium can be corrected.

CO2: be able to understand how the exchange rate is determined.

CO3: be able to understand the basis for and gains from trade.

CO4: be able to understand the basic aspects of public finances.

Bachelor of Science (Economics) (Semester –IV)
Session 2020-21
Course Code: BECL-4175
INTERNATIONAL ECONOMICS AND PUBLIC FINANCE

Time: 3 Hours **Max. Marks: 100**
Theory: 80
CA: 20

Note: Instructions for the Paper–Setters:
Two questions, each carrying 16 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
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, rationale of a protectionist policy in 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 importance. Public Expenditure: Meaning, principles, importance, effect of public expenditure on production and distribution.

UNIT–IV
Taxes: Meaning, classification, features of a good taxation system, canons of taxation, incidence and impact of taxation. Public Debt: Meaning, objectives, importance, its burden.

Recommended Texts:
1. Sodersten B.O., *International Economics, Macmillan*, London.
2. Salvatore B., *International Economics, Macmillan Publishing Company*, New York.

SOCIAL OUTREACH PROGRAMME

AUDIT COURSE (Value Based)

Course Title: Social Outreach

ProgrammeCourse Duration: 30

hours

Course intended for: Semester IV students of undergraduate degree programmesof all streams.

Course Credits: 2

Course Code: SECS- 4522

Course Description:-

The Social outreach programme proposes to equip the students for community upliftment work. It will strive to prepare citizens who will make a marked difference in the society. The students will be provided with numerous opportunities to build their knowledge and skills on the fundamental values of social fairness and compassion.

The programme will focus on integrating academic work with community services. It will equip the students to learn to connect knowledge gained in classroom with real life situation by getting hands on experience through community services. It will also foster the development of civic responsibility. The students will get an opportunity to

- Engage in social service.
- Reflect upon larger issues that affect communities through readings anddiscussions.
- Integrate academic learning and community engagement through practicalfield work.
- Develop awareness, knowledge and skills for working with diverse groups inthe society.

Expectations:-

The students are expected to be actively engaged in working on any of the projects listed below as volunteers. Evaluation will be based on consistency, commitment and results achieved in areas taken up.

List of Projects under Social Outreach Programmes:

- Working as Motivators under the Swatch Bharat Campaign of theGovernment,
- Literacy drive : (i). Teaching in the Charitable School Adopted by the
- College(ii).Work in projects undertaken by Rotary Club of Jalandhar.

For inducting students in child labour Schools.

- Enroll as NSS Volunteers for various projects (Cleanliness, Women healthawareness)
- Counseling camps in villages
- Tree plantation (i) Maintaining the trees in the park adopted by the college in Vikas Puri, Jalandhar
  (ii)Enroll for projects undertaken by JCI Jalandhar City
- Enroll in the Gandhian Studies Centre as student Volunteer for surveys invillages.
- Women Empowerment Programmes in collaboration with JCI JalandharGrace
- Generating awareness on voting among the youth.
- Drug Abuse (Generate awareness among the school children)
- Environment Awareness (Reduce Pollution)
- Old Age Homes/Orphanages
- Operating the Empathy Corner outside the college gate.
- Disaster Management/Relief Work

Evaluation /Assessment:

In the beginning of the semester the students after enrolling for one of theProjects offered will be given deadlines for the project.

- Students will be responsible for getting their hours of service recorded with the faculty and also map the progress of their subjects (children, old people, saplings etc.) .
- The respective departments will monitor the involvement of their students
- The students will submit a report of the project taken up by them.
- There will be no written examination, The students will be given grade on the basis of evaluation of the projects by an evaluation committee, comprising of the Dean of the respective streams, Head and two teachers of the concerned department.
- **Total Marks: 25**

Project : 20

Internal Assessment :05

Kanya Maha Vidyalaya, Jalandhar (Autonomous)
SCHEME AND CURRICULUM OF EXAMINATIONS OF THREE YEAR DEGREE PROGRAM

Bachelor of Science (Economics)

Session: 2020-21

Bachelor of Science (Economics) Semester V									
Course Code		**Course Name**			**Course Type**	**Marks**			**Examination time (in Hours)**
						Total	**Ext.**	**CA**	
							L / **P**		
BECL-5421 BECL-5031 BECL-5431		Punjabi(Compulsory) [1]Basic Punjabi [2]Punjab History and Culture			C	50	40 / -	10	3
BECL-5212		English (Compulsory)			C	50	40 / -	10	3
BECM-5333		**Mathematics**	I	Dynamics	E	100	80 (40+40) / -	20	3+3
			II	Number Theory					
BECL-5453		**Quantitative Techniques** (Quantitative Techniques-V)			E	100	80 / -	20	3
BECM-5134		**Computer Science** (Database Management Systems and Oracle)			E	100	50 / 30	20	3+3
	(P)	**Computer Science** (Database Management Systems and Oracle) (PRACTICAL)							
BECM-5124		**Computer Applications (Vocational)** (Internet and Web Processing)			E	100	50 / 30	20	3+3
	(P)	**Computer Applications (**Internet and Web Processing) (PRACTICAL)							
BECL-5175		**Economics (** Economics of Development)			C	100	80 / -	20	3
Total						**400**			

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 –V)
Session 2020-21

PUNJABI (COMPULSORY)

COURSE CODE- BECL -5421

COURSE OUTCOMES

CO1: u7thN? gKTph eUT7hN? w gVTA7 YT YwoE ftfYNToEhN? NYo eUT7hN?g7hfYWuAgh, AM w gYT eowT U।

CO2:wTtW TU UYToT Kht7T (YWhg eo fNtT7T)w fAWpA ftu PTfYW eo e ftfYNToEhN? NYo wTtWgV7 Yh ouh w gYT eowT U N7 fTA ATfU7 og wTW wTW KV7T U।

CO3:goT ouwT eow wTW ftfYNToEh NTg7h rZW w efU7 Yh KTu fAZy7r N7 fTU fYYTrh eAo7 ftu AUTTh Utrh।

CO4:AoW Nro!h go YT gKTph ftu NwtTY YT YwoE ftfYNToEhN? Yh pZOh w 7hy7 eofYN? Aw? Yh fWy7 gf7GT w AKTro eowT U।

CO5: gKTph Owh ftA7, tTeT7Ye Kr7? : YW 7 NfOeTo,eToe 7 eToeh ApO w gVTA7 YT YwoE ftfYNToEhN? NYo GTPT Yh NYhoh N7 pTohehN? w AYM7 WTh tZyo - tZyo fAO?7? YT fteTA eowT U।

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

PUNJABI (COMPULSORY)

COURSE CODE- BECL -5421

AY? : S xN **Maximum Marks: 50**

Theory: 40

CA: 10

gTO eY N7 gTO gA7e?

:fwN-I

u7thN? gKTph eUT7hN?
(AgT. vT. ofYYo eo, gpWhePw fpAo, ro wTwe Yt :whtofANh, NfY7Ao, 2018)

Wye	eUT7h	eUT7h ArfU
NKh7 eo	fwA :hNo	Y7 NWh pTp Yh
fKYo	Aoh	K\Y
AyKh7 U?	U!To eUT7hN? YT pTg	Y fTKNTT eoYh
Kf7Yo U?A	oTU e7	ThPto YT KwY
gY geTP	NoKw SV rvhowT	eM N7feUT th
uYw wrh	Uoy Ar	Uoy Ar
KAftYo fAx	yU yT7	yU yT7
roYt fAx ogT7T eUT7hN?	PhPT	PhPT N7 Uo

(ਿਵਸ਼ਾ-ਵਸਤੂ/ਸਾਰ) **8 Ne**

:fwN-II

wTtW : TU UYToT KhT7T (YWhg eo fNtT7T)
(ਿਵਸ਼ਾ-ਵਸਤੂ/ਸਾਰ) **8 Ne**

:fwN-III

Wrgr 200 PpY? ftu goT ouwT

AoW Nro!h go YT gKTph ftu NwtTY **8 Ne**

:fwN-IV

ftNTeo7 :
(A) w?t tTeP
(N) YW 7 NfOeTo **8 Ne**

Ne tv N7 gohfyNe WTh UYTfT7?

1. **gPw gZ7o Y uTo AePw U7rlAePw A-D 7Ze Y gPw :fwN I-IV ftuA gZS KT7rl Uo AePw ftu Y gPw gZS KT7rl**

2. **ftfYNToEh w eW gK gPw eow Uwl Uo AePw ftuA fTe gPw WT!Yh Ul gKt? gPw feA th AePw ftuA eh7T KT AeYT Ul**

S. **Uoe gPw Y 08 Ne Uwl**

4. **ggo AZN eow tTWT Keo uTU 7? gPw? Yh tv NZrA tZO 7A tZO uTo Ag gPw? ftu eo**

AeYT Ul

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

Basic Punjabi (In lieu of Punjabi Compulsory)

COURSE CODE- BECL -5031

COURSE OUTCOMES

Co1:‘ATfU7 Y or’ gA7e Y eft7T GTr w gVTA7 YT YwoE ftfYNToEhN? NYo eft7T g7h fYWuAgh, AM w gYT eowT U 7? fe AU NTOfwe Yo ftu uW oUhN? eTft OToTt? N7 ethN? pTo frNTw UTAW eo Ae7I fTA YT Uo YwoE eft7T Yh ftNTfyNT, ftPWP7 7 YWe7 Yh gfefoNT 7A KT7 eoTA7T th U 7? fe AU AYeTWh AYTK YhN? AYZfANTt? w AYM Ae7 N7 NTWuwT7Ye fYPNh p7T Ae7I

Co2:‘ATfU7 Y or’ gA7e Y eUT7h GTr w fAWpA ftu PTfYW eo e ftfYNToEhN? NYo eUT7h gV7 Yh ouh w gYT eowT U N7 eUT7h Kr7 wTW KV7T UI

CO3:pU7 PpY? Yh E? fTe PpY N7 pUNToEe PpY w gVTA7 YT YwoE ftfYNToEhN? NYo ftNTeo7 g7h fYWuAgh, AM w gYT eowT UI

CO4: AYTwoEe PpY, ftoOToEe PpY w gVTA7 YT YwoE ftfYNToEhN? NYo ftNTeo7 g7h fYWuAgh, AM w gYT eowT UI

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

Basic Punjabi (In lieu of Punjabi Compulsory)

COURSE CODE- BECL -5031

AY? : S xN **Maximum Marks: 50**
Theory: 40
CA: 10

gTO eY

:fwN-I

ATfU7 Y or (AgT.vT YfUW fAx),GTr gfUWT(eft7T),oth ATfU7 geTPw,NfY7Aol
GTTh tho fAx(AY?,uPYT)
g.gow fAx(gKTp w ee? Y,UW tTU7 tTW)
g.YUw fAx(Y?,eTh NTfTNT ATv ftUV)
(eft7Tt? fAWpA YT fUZAT Uw)
(ATo) **08**
Ne

:fwN-II

ATfU7 Y or (AgT.vT YfUW fAx),GTr gfUWT(eUT7h),
oth ATfU7 geTPw,NfY7Aol
gYh Y fwNT7,eWch,xN7T (eUT7hN? fAWpA YT fUZAT Uw)

(ATo) **08 Ne**

:fwN-III

(A) pU7 PpY? Yh E? fTe PpY

(N) pUNToEe PpY **08 Ne**

:fwN-IV

(A) AYTwoEe PpY

(N) ftoOToEe PpY **08 Ne**

Ne tv N7 gohfyNe WTh UYTfT7?

1. **gPw gZ7o Y uTo AePw U7rlAePw A-D 7Ze Y gPw :fwN I-IV ftuA gZS KT7rl Uo AePw ftu Y gPw gZS KT7rl**

2. **ftfYNToEh w eW gK gPw eow Uwl Uo AePw ftuA fTe gPw WT!Yh Ul gKt? gPw feA th AePw ftuA eh7T KT AeYT Ul**

S. **Uoe gPw Y 08 Ne Uwl**

4. **ggo AZN eow tTWT Keo uTU 7? gPw? Yh tv NZrA tZO 7A tZO uTo Ag gPw?**

ftu eo AeYT Ul

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

Course Title: Punjab History and Culture (From 1849-1947 A.D)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)
COURSE CODE: BECL-5431

COURSE OUTCOMES:-

After completing the course student have understanding of Punjab in the pre-independence phase

CO 1:- Students will understand major changes in the Punjab during British Rule

CO 2:- They will also know about important agitations and their outcomes on the politics of the Punjab.

CO 3:- They will gain knowledge about the society and economy of Punjab

CO 4:-They will be able to evaluate the socio-religious reforms movements of Punjabi society

CO 5:- They will have insights into the details of the partition of Punjab

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

Course Title: Punjab History and Culture (From 1849-1947 A.D)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)
COURSE CODE: BECL-5431

Examination Time: 3 Hours **Max. Marks: 50**
Theory: 40
CA: 10

Instructions for the Paper Setters

13. Question paper shall consist of four Units
14. Examiner shall set 8 questions in **600 words** by selecting **Two Questions** of equal marks from each Unit.
15. Candidates shall attempt **5 questions** in all, by at least selecting **One Question** from each Unit and the **5th question** may be attempted from any of the **four Units**.
16. Each question will carry 8 marks

Unit- I

1. First Anglo-Sikh War.
2. Annexation of Punjab and Board of Administration

Unit-II

3. British Policy towards agriculture and industry
4. Spread of modern education

Unit-III

5. Socio- religious reform movements: Namdhari, Singh Sabha, AryaSamaj and Ad Dharm
6. Gadhar Movement

Unit-IV

7. Gurdwara Reform Movement
8. Contribution to freedom struggle: Jallianwala Bagh tragedy; Non-cooperation and Quit India Movement.

Suggested Readings

- Singh, Fauja, *History and Culture of the Punjab*, Part II, Publication Bureau, Punjabi University, Patiala, 1987.
- Singh, Fauja, *Freedom Struggle in the Punjab*, Publication Bureau, Punjabi University, Patiala, 1974.

- Grewal, J.S., *The Sikhs of the Punjab*, New Cambridge House, New Delhi, 2005.
- Singh,Kushwant , *A History of the Sikhs*. Vol. II (1839-1998), Oxford University Press, Delhi, 1991.
- Rai, Satya. M (1978), *Heroic Tradition in the Punjab (1900-1947*). Punjabi University, Patiala, 1978.
- Chopra, P.N.& Das, M.N. (1974), *A Social, Cultural & Economic History of India.* Vol.III, Macmillan India, 1974.
- Saini B. S, *The Social & Economic History of the Punjab 1901-1939,* EssEss Publications, Delhi, 1975.
- Mittal, S.C, *Freedom Movement in the Punjab (1905-29),* Concept Publishing Company Delhi, 1977.

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

ENGLISH (COMPULSORY)
Course Code: BECL -5212

COURSE OUTCOMES

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

CO 1: widen their knowledge about various literary devices used in poetry such as tone, style, imagery, figures of speech, symbolism etc.

CO 2: develop power of imagination and appreciate the beauty, rhyme, and style of a poem

CO 3: analyze and appreciate the dramatic technique, plot development and art of characterisation in the prescribed play

CO 4: develop an understanding of the insights, genres, conventions and experimentations associated with English Drama

CO 5: develop the knowledge, skills and capabilities for effective business writing such as letter writing and resume writing

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

ENGLISH (COMPULSORY)
Course Code: BECL -5212

Max. Marks: 50
Examination Time: 3 Hrs **Theory: 40**
CA: 10

Instructions for the Examiner:

Section A: Three questions from the play *All My Sons* from Unit I and three questions from *Poems of Nature and Culture* from Unit II requiring very short answers will be set. The students would be required to answer any five, each carrying two marks (50 words each). **(5x2=10)**

Section B: Four questions requiring brief descriptive answers based on character, tone, plot and theme(s) in the play *All My Sons* from Unit I will be set and the students would be required to attempt any two, each carrying five marks (250 words each). **(2x5= 10)**

Section C: Four questions based on the central idea, theme, tone or style etc. of the prescribed poems from the textbook, *Poems of Nature and Culture* from Unit II will be set for the students to attempt any two of these, each carrying five marks (250 words each). The questions can also be set based on stanzas with reference to context. **(2x5= 10)**

Section D: Two questions with internal choice will be set based on (a) formal letter (b) Job application and Resume Writing, each carrying five marks. **(2x5=10)**

Unit I

All My Sons by Arthur Miller

Unit II

Poems of Nature and Culture
William Wordsworth: The World is Too Much with Us
Gordon Lord Byron: She Walks in Beauty
P.B. Shelly: Ozymandias
Alfred Lord Tennyson: In Memoriam
Mathew Arnold: Dover Beach
Wilfred Owen: Strange Meeting
Robert Graves: The Portrait
W.H. Auden: The Unknown Citizen
Ted Hughes: The Thought-Fox
Sylvia Plath: Mirror
Rabindranath Tagore: False Religion
Nissim Ezekiel: Night of Scorpion

Unit III

Formal letter, Job Application and Resume Writing

Texts Prescribed:

1. *All My Sons* by Arthur Miller
2. *Poems of Nature and Culture,* Guru Nanak Dev University, Amritsar
3. *Oxford Guide to Effective Writing and Speaking* by John Seely.

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

Course Title: Mathematics (Dynamics)

Course Code: BECM -5333(I)

Course Outcomes

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

CO 1: Identify the basic relations between distance, time, velocity and acceleration.

CO 2: Explain the relationship between forces and motion. Differentiate between balanced and unbalanced forces and Explain how unbalanced force affect motion.

CO 3: Understand Newton's Laws of Motion and Apply the laws to solve many problems.

CO 4: Discuss the motion of particles connected by a string, motion along a smooth inclined plane.

CO 5: Solve different types of problems with Variable Acceleration.

CO 6: Discuss Simple Harmonic Motion and Illustrate it with a variety of examples.

CO 7: Solve Pendulum, Damped and forced Oscillations oscillating system problems.

CO 8: Define Work, Power and Energy and Explain their relationship. Use measurement tools to apply the concepts of Work and power to solve real life problems.

CO 9: Define Energy and Identify the different types that exist

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

Course Title: Mathematics (Dynamics)

Course Code: BECM -5333(I)

Examination Time:3 Hours

Max.Marks: 50
Theory:40
CA:10

Instructions for the 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 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. 30% of the questions in the question paper must be theoretical (theorem based).

Unit-I

Rectilinear motion in a straight line with uniform acceleration, Newton's laws of motion.Motion of two particles connected by a string.

Unit-II

Motion along a smooth inclined plane.Variable acceleration.Simple Harmonic Motion.

Unit-III

Curvilinear motion of particle in a plane, Definition of velocity and acceleration, projectiles, velocity and direction of motion of a projectile after a given time, projectiles on an inclined plane. Oscillations: Free Vibrations, Simple Pendulum, Conical Pendulum.

Unit-IV

Work, Power and Energy: Kinetic and Potential energy, Conservative forces. Theorem of conservation of energy.Work done against gravity.

Text Book:

S.R.Gupta: A text book of Dynamics

Reference Books:

1. F. Chorlton: Dynamics.

2. S.L. Loney: An Elementary Treatise on the Dynamics of a Practice and of Rigid Bodies, Cambridge University Press, 1956.

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

Course Title: Mathematics (Number Theory)

Course Code: BECM -5333(II)

Course Outcomes

Successful completion of this course will enable the students to:

CO 1: Prove results involving divisibility and greatest common divisors.

CO 2: Solve system of linear congruences.

CO 3: Find solutions of specified linear Diophantine equation.

CO 4: Apply Fermat's and Euler's theorem to prove relation involving prime numbers.

CO 5: Apply the Wilson's theorem to solve numerical problems.

CO 6: Solve system of equations using congruences.

CO 7: Understand and apply properties of phi functions in real world problems.

CO 8: Understand application of important arithmetic functions.

Bachelor of Science (Economics)
(Semester–V)
Session 2020-21

Course Title: Mathematics (Number Theory)

Course Code: BECM -5333(II)

Examination Time: 3 hrs. Max.Marks: 50
Theory: 40
CA:10

Instructions for the 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 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. 30% of the questions in the question paper must be theoretical (theorem based).

Unit-I

The division algorithm, The greatest common divisor, least common multiple, The Euclidean algorithm.

Unit-II

The Diophantine equation ax + by = c, Prime numbers and their distribution, the fundamental theorem of arithmetic, Basic properties of congruences.

Unit-III

Linear congruences, Special divisibility tests, Chinese remainder theorem, The Fermat's theorem, Wilson's theorem

Unit-IV

Euler's Phi function, Euler's theorem, some properties of the Phi Function, σ and τ functions, Mobius Inversion formula, Greatest integer function

Text Book:D. Burton: Elementary Number Theory, Sixth Edition, McGraw-Hill. (Scope in Chapters 2-5, 7) 2005.

Reference Book:

Niven and Zuckerman: An Introduction to Number Theory, Wiley 1972.

Bachelor of Science (Economics)
(Semester–V)
Session 2020-21
Course Code: BECL-5453
Quantitative Techniques-V

Course Outcome:

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

CO 1: understand the process of formulation and of testing the hypothesis.

CO 2: understand the theoretical details of sampling distributions and their basic applications.

CO 3: learn ANOVA to split and analyse the variations in economic phenomenon.

Bachelor of Science (Economics)
(Semester–V)
Session 2020-21
Course Code: BECL-5453
Quantitative Techniques-V

Time: 3 Hours **Max Marks: 100**
Theory: 80
CA: 20

Note: Instructions for the Paper–Setters:

Two questions, each carrying 16 marks, from each of Units I-IV (i.e. a total of eightQuestions) 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

Statistical Inference: Point & Interval Estimation; Properties of a Good Estimator, Maximum Likelihood Method of Estimation and derivation of mean and variance of Binomial, Poisson and Normal distributions using MLE. Basic Concepts of Null and Alternative Hypotheses, Types of Errors; One Tailed and Two Tailed Tests, Power of Test, Critical Region.

UNIT–II

Sampling Distributions: Derivation of properties of Z, T, Chi Square and F distributions.

UNIT–III

Tests of significance based upon distribution of Z, t, F and Chi-square.

UNIT–IV

Analysis of Variance: Introduction, Assumptions, Techniques of Analyzing Variance, Analysis of Variance of one-way and two-way classification.

Books Recommended:

1. Sukhatme, P.V. and Sukhatme, B.V.: Sampling Theory of Surveys with Applications, Lowa State University Press, Ames, Lowa (1970).

2. Goon, Gupta and DassGupta:An Outlines of Statistical Theory, Dass Gupta Vol. 1(1977).

3. Kapur and Gupta: Fundamentals of Mathematical Statistics, Sultan Chand, New Delhi.

4. Murry, R. Spiegal Statistics: Theory & Practical (1972), McGraw Hill, New York.

Bachelor of Science (Economics)
(Semester–V)
Session 2020-21

COURSE CODE:BCSM-5134

COMPUTER SCIENCE

(DATA BASE MANAGEMENT SYSTEM & ORACLE)

Course Outcomes:

After passing course the student will be able to:

CO1: Understand data, database and database models.

CO2: Gain knowledge of normalization and transaction control.

CO3: Gain knowledge of core database language-SQL.

CO4: Have a basic understanding of concepts of PL/SQL.

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

COURSE CODE:BCSM-5134

COMPUTER SCIENCE

(DATA BASE MANAGEMENT SYSTEM & ORACLE)

(THEORY)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

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.The students can use only Non–programmable & Non–storage type calculator

UNIT–I

DBMS:

Introduction to database management system, Components of DBMS, Three Level Database system Architecture, ER.Diagrams.

Data Models, Hierarchical Model, Network Model and Relational Model, Relational Databases, Relational Algebra and Calculus.

UNIT–II

Normalisation: Introduction, Normal Forms: 1NF, 2NF, 3NF, BCNF, 4NF, 5NF.

Database Security: Protection, Integrity.

Recovery: Introduction, Recovery Techniques: Log Based Recovery and Shadow Paging.

Concurrency Control: Introduction, Concurrency control with locking methods, Two Phase locking, Precedence graph, Concurrency control based on timestamp ordering, Concurrency control based on optimistic scheduling.

UNIT–III

SQL * PLUS:

Introduction to Oracle 10g, Features of Oracle 10g.

SQL – DDL, DML, DCL,TCL,constraints, Join methods & Sub query, Union, Intersection,Built in Functions, View, and Security amongst users, Sequences, indexing object

UNIT–IV

PL/SQL:

Introduction to PL/SQL.

Cursors – Implicit & Explicit.

Procedures, Functions & Packages

Database Triggers.

References/Textbooks:

1. C. J. Date, An Introduction to Database Systems, Pearson Education 2000.
2. H. F. Korth & Silverschatz, A., Database System Concepts, Tata McGraw Hill, 2010.
3. Elmasri & Navathe, Fundamentals of Database Systems, Addison-Wesley, 2011.
4. B.C.Desai, An Introduction to Database Management System, Galgotia Publication, 1991.
5. Ivan Bayross, SQL, PL/SQL - The Programming Language of Oracle, BPB Publications, 2010.
6. Gurvinder Singh, Parteek Bhatia, Simplified Approach to DBMS, Kalyani Publishers, 2016.
7. Anshuman Sharma, Fundamentals of DBMS, Lakhanpal Publications, 4th Edition.

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

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

COURSE CODE:BCSM-5134

COMPUTER SCIENCE

(DATA BASE MANAGEMENT SYSTEM & ORACLE)

(PRACTICAL)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

Lab based on Oracle 10g.

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

COURSE CODE: BECM-5124

COMPUTER APPLICATIONS (VOCATIONAL)
(INTERNET AND WEB DESIGNING)

Course Outcomes:

After passing course the student will be able to:

CO1: Understand Internet basics and it's working.

CO2: Gain knowledge of email service on different mail servers.

CO3: Understand different Internet protocols and search engines.

CO4: Have knowledge of basic web designing using markup languages.

Bachelor of Science (Economics)
(Semester –V)
Session 2020-21

COURSE CODE: BECM-5124

COMPUTER APPLICATIONS (VOCATIONAL)
(INTERNET AND WEB DESIGNING)

(THEORY)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

Instructions for the Paper Setters:–
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

Internet: Introduction, its evolution, working, IP Address, DNS and its classification, working of DNS, Internet Services, ISP, Types of internet connection, Internet Security, Advantages, Disadvantages and Uses of Internet.

Search Engines: Introduction, its working, searching using google, web directory, Meta search engines.

UNIT – II

E–Mail: Introduction, its working, E-mail protocols: SMTP, POP, IMAP, Structure of E-mail, Operations on E-mail, Address Book, Signature, File attachment, MIME, Web based E-mail, Spams, Advantages and limitations of E-mail

Browsers: Introduction, Features of Internet Explorer and Google Chrome.

UNIT – III

HTTP: HTTP Protocol and its structure

WWW: Introduction and its working

TCP/IP Protocols: PPP, SLIP

FTP: Introduction, its working, FTP Commands, FTP Session, Advantages and Disadvantages of FTP

UNIT – IV

HTML and Web Designing: Introduction, Structure and creation of HTML document, Formatting Text, Lists, Font element, Advantages and Disadvantages of HTML, Hyperlinks, Images, Tables, Frames, Forms.

References/Textbooks:

1. Keith Sutherland, Understanding the Internet: A Clear Guide to Internet Technologies, Butterworth-Heinemann, 2000.
2. S. K. Bansal, Internet Technologies, APH Publishing Corporation, 2002.
3. Forouzan B., Data Communications and networking, McGraw Hill, 2007.

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

Bachelor of Science (Economics)
(Semester–V)
Session 2020-21

COURSE CODE: BECM-5124

COMPUTER APPLICATIONS (VOCATIONAL)
(INTERNET AND WEB DESIGNING)

(PRACTICAL)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

Practical Based on Internet and Web Designing.

Bachelor of Science (Economics)
(Semester–V)
Course Code: BARL-5175
Economics of Development

Course Outcomes:

After passing this course students will be able to:

CO1: understand the different path ways of economic development, recognize the importance of assumptions in development models and their policy implications.

CO2: critically evaluate economic problems of developing and least developed countries and participate in the contemporary policy debate on development priorities

Bachelor of Science (Economics)
(Semester–V)
Session 2020-21
Course Code: BARL-5175

Economics of Development

Time: 3 Hours **Max. Marks: 100**
Theory: 80
CA: 20

Note: Instructions for the Paper–Setters:
Two questions, each carrying 16 marks, from each of Units I-IV (i.e. a total of eightQuestions) 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

Economic Development: Meaning and Measurement, Economic and Non-Economic Factors, Characteristics of Developing and Least Developed Countries. Human Development Index, Concept of Sustainable Development.

Dualism: Social and Technological Dualism

Lewis Model of Unlimited Supply of Labour, Problems of Unemployment and Disguised Unemployment.

UNIT–II

Models of Growth: Classical, Marxian, Schumpeter's, Harrod-Domar and Solow's Growth Models.

UNIT–III

Rostow's Stages of Growth,

Strategies of Economic Development-Balanced vs. Unbalanced Growth; Theory of Big Push; Leibenstein's Critical Minimum Efforts Thesis

Export Promotion and Import Substitution.

UNIT–IV

Capital Formation – Meaning and Sources.

Choice of Technique

Role of Planning in Under Developed Countries, Need, Objective, Strategy, Types and Problems of Planning.

Suggested Readings:

1. Meier, G.M.(1995),*Leading Issues in Economic Development*, Oxford University Press, New Delhi.
2. Thirlwall, A.P.(2011),*Economics of Development*, Palgrave Macmillan.
3. Todaro, M.P. and Smith ,S.C. (2018), *Economic Development*, Pearson India
4. Misra and Puri (2016) ,*Economics of Development and Planning* , Himalaya Publishing House ,New Delhi

Kanya Maha Vidyalaya, Jalandhar (Autonomous)
SCHEME AND CURRICULUM OF EXAMINATIONS OF THREE YEAR DEGREE PROGRAM

Bachelor of Science (Economics)

Session: 2021-22

Bachelor of Science (Economics) Semester VI									
Course Code		**Course Name**			**Course Type**	**Marks**			**Examination time (in Hours)**
						Total	**Ext.**	**CA**	
							L / **P**		
BECL-6421 BECL-6031 BECL-6431		Punjabi(Compulsory) [1]Basic Punjabi [2]Punjab History and Culture			C	50	40 / -	10	3
BECL-6212		English (Compulsory)			C	50	40 / -	10	3
BECM-6333		**Mathematics**	I	Linear Algebra	E	100	80 (40+40) / -	20	3+3
			II	Numerical Analysis					
BECL-6453		**Quantitative Techniques** (Quantitative Techniques-VI)			E	100	80 / -	20	3
BECM-6134		**Computer Science** (Information Technology)			E	100	50 / 30	20	3+3
	(P)	**Computer Science** (Information Technology) (PRACTICAL)							
BECM-6124		**Computer Applications (Vocational)** (Business Data Processing)			E	100	50 / 30	20	3+3
	(P)	**Computer Applications (** Business Data Processing) (PRACTICAL)							
BECL-6175		**Economics** (QUANTITATIVE METHODS FOR ECONOMISTS)			C	100	80 / -	20	3
Total						**400**			

C-Compulsory
E-Elective
[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.

BACHELOR OF SCIENCE (ECONOMICS) Semester VI
Session 2020-21
PUNJABI (COMPULSORY)
COURSE CODE:BECL -6421

COURSE OUTCOMES:

CO1: u7thN? gKTph eUT7hN? w gVTA7 YT YwoE ftfYNToEhN? NYo eUT7hN?g7hfYWuAgh, AM w gYT eowT U।

CO2:wTtW TU UYToT Kht7T (YWhg eo fNtT7T)w fAWpA ftu PTfYW eo e ftfYNToEhN? NYo wTtWgV7 Yh ouh w gYT eowT U N7 fTA ATfU7 og wTW wTW KV7T U।

CO3:goT ouwT eow wTW ftfYNToEh NTg7h rZW w efU7 Yh KTu fAZy7r N7 fTU fYYTrh eAo7 ftu AUTTh Utrh।

CO4:AoW Nro!h go YT gKTph ftu NwtTY YT YwoE ftfYNToEhN? Yh pZOh w 7hy7 eofYN? Aw? Yh fWy7 gf7GT w AKTro eowT U।

CO5: gKTph Owh ftA47, tTeT7Ye Kr7? : YW 7 NfOeTo,eToe 7 eToeh ApO w gVTA7 YT YwoE ftfYNToEhN? NYo GTPT Yh NYhoh N7 pTohehN? w AYM7 WTh tZyo - tZyo fAO?7? YT fteTA eowT U।

BACHELOR OF SCIENCE (ECONOMICS) Semester VI
Session 2020-21
PUNJABI (COMPULSORY)
COURSE CODE:BECL -6421

AY? : S xN **Maximum Marks: 50**

Theory: 40
CA: 10

gTO eY N7 gTO gA7e?

:fwN-I

eTft rot (gfUW S eth)(AgT. fpeoY fAx xY7, eoYKh7 eo),ro wTwe Yt :whtofANh, NfY7Ao,
(Py |ohY, PTU UAw, ro wTwe Yt Kh, ro NoKw Yt Kh,tTfoA PTU, PTU YUYY)
(gAr AfU7 ftNTfyNT/ftAT tA7/ATo)8 Ne

:fwN-II

Oo7hN? Y rh7 (A|owTYT), pofKYo fAx UYYoY,wTwe fAx gA7eYTWT, NfY7Ao
(AYTK AfGNTuTo gfogy/AcowTY Y 7o 7 goy)8 Ne

:fwN-III

(A) Wy ouwT (ftfrNTw, 7ewTWKh N7 uW7 YAfWN? ApOh)
(N) Ayg ouwT

8 Ne

:fwN-IV

ftNTeo7 :
(A) ftNTeowe A7hN? : fWr, tuw,eToe
(N) fefoNT tTeP : gfoGTPT, p77o 7 geTo8 Ne

Ne tv N7 gohfyNe WTh UYTfT7?

1. **gPw gZ7o Y uTo AePw U7rIAePw A-D 7Ze Y gPw :fwN I-IV ftuA gZS KT7rI Uo AePw ftu Y gPw gZS KT7rI**
2. **ftfYNToEh w eW gK gPw eow UwI Uo AePw ftuA fTe gPw WT!Yh UI gKt? gPw feA th AePw ftuA eh7T KT AeYT UI**
3. **Uoe gPw Y 08 Ne UwI**
4. **ggo AZN eow tTWT Keo uTU 7? gPw? Yh tv NrA tZO 7A tZO uTo Ag gPw? ftu eo AeYT UI**

BACHELOR OF SCIENCE (ECONOMICS) SEMESTER–VI
Session 2020-21
Basic Punjabi (In lieu of Punjabi Compulsory)
COURSE CODE: BECL -6031

COURSE OUTCOMES:

CO1:ATfU7 Y or' gA7e Y tTo7e GTr w gVTA7 YT YwoE ftfYNToEhN? NYo tTo7e g7h fYWuAgh, AM w gYT eowT U▌

CO2:fTA YT Uo YwoE GTP7 eWT 7 fWy7 eWT Yh fwgw7T gYT eowT U▌

CO3:'ATfU7 Y or' gA7e Y oyT fuZ7o GTr w fAWpA ftu PTfYW eo eftfYNToEhN? NYo oyT fuZ7o w gV7 Yh ouh w gYT eowT U 7 fTUw? YUTw P\AhN7?Yh A|W7T fgZS xTWhN? xTW7Tt? 7 tTe| eotTAhfYN? Khtw AO gYTw eowT U▌

CO4: Nro!h 7A gKTph ftu NwtTYYwoE fWy7 eWT Yh fwgw7T gYT eowT U▌

CO5:GTPT N7 AgGTPT Yh gfoGTPT 7 gKTph YhN? AgGTPTt?w gVTA7 YT YwoE ftfYNToEhN? NYo GTPT N7 AgGTPT g7h fYWuAgh, AM w gYT eowT U▌

BACHELOR OF SCIENCE (ECONOMICS) SEMESTER–VI
Session 2020-21
Basic Punjabi (In lieu of Punjabi Compulsory)
COURSE CODE: BECL -6031

gTO eY

:fwN-I

ATfU7 Y or (AgT.vT YfUW fAx),GTr YKT (tTo7e),oth ATfU7 geTPw,NfY7Aol
(rrTYhw,Y?,GTTh YoYTwT Kh Wy gTOeY YT fUZAT Uw)
(ATo) 08 Ne

:fwN-II

ATfU7 Y or (AgT.vT YfUW fAx),GTr YKT (oyT fuZ7o),oth ATfU7 geTPw,NfY7Aol
(vT.rvT fAx ,fwZeh eUT7h YT pTYPTU,fYWyT fAx oyT fuZ7ogTOeY YT fUZAT Uw)
(ATo) 08 Ne

:fwN-III

Nro!h 7A gKTph ftu NwtTY

(A) go ftu NwtTY
(N) tTe? ftu NwtTY 08 Ne

:fwN-IV

(A) GTPT Yh gfoGTPT 7 ftPP7Ttt?
(N) AgGTPT: gfoGTPT 7 gKTph YhN? AgGTPTt? 08 Ne

Ne tv N7 gohfyNe WTh UYTfT7?

1. **gPw gZ7o Y uTo AePw U7rlAePw A-D 7Ze Y gPw :fwN I-IV ftuA gZS KT7rl Uo AePw ftu Y gPw gZS KT7rl**
2. **ftfYNToEh w eZW gK gPw eow Uwl Uo AePw ftuA fTe gPw WT!Yh Ul gKt? gPw feA th AePw ftuA eh7T KT AeYT Ul**
3. **Uoe gPw Y 08 Ne Uwl**
4. **ggo AZN eow tTWT Keo uTU 7? gPw? Yh tv NZrA tZO 7A tZO uTo Ag gPw?**

ftu eo AeYT Ul

Bachelor of Science (Economics) (Semester –VI)
Session 2020-21
Course Title: Punjab History & Culture (1947- 2000 A.D.)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)
Course Code:BECL-6431

COURSE OUTCOMES:-

After completing this paper the students will be able to

CO 1:-comprehend Punjab's contribution in the freedom struggle, the exodus and Rehabilitation

CO 2:- understand the history of Punjab from independence with special reference to partition and the formation of New Punjab in 1966

CO 3:- understand the objectives, planning and outcomes of Green Revolution in the Punjab

CO 4:- criticallyanalyze thegrowth of education, Punjabi literature and Drama in the Punjab after Independence

CO 5:- the drug abuse problem, management and prevention in the Punjab

Bachelor of Science (Economics) (Semester –VI)
Session 2020-21
Course Title: Punjab History & Culture (1947- 2000 A.D.)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)
Course Code: BECL-6431

ExaminationTime: 3 Hours **Max. Marks: 50**
Theory: 40
CA: 10

Instructions for the Paper Setters:

1. Question paper shall consist of four Units.
2. Examiner shall set 8 questions in all by selecting two Questions of equal marks from each Unit.
3. Candidates shall attempt 5 questions in 600 words, by at least selecting One Question from each Unit and the 5th question may be attempted from any of the four Units.
4. Each question will carry 8 marks

UNIT I

1. Partition and its Impact on Punjab
2. Rehabilitation.

UNIT II

3. Punjabi Suba Movement and Act of 1966.
4. Green Revolution.

UNIT III

5. Punjabi Diaspora (Canada)
6. Development of education in Punjab after Independence

UNIT IV

7. Development of Punjabi Literature and Drama.
8. Emerging Concerns: Drug Addiction and Female Foeticide

Suggested Readings:

1. Chopra, P.N. & Das, M.N. (1974), *A Social, Cultural & Economic History of India.* Vol.III, Macmillan India, New Delhi, 1974.
2. Grewal, J.S., *Social and Cultural History of Punjab: Prehistoric, Ancient and Early Medieval*. Foundation Books Pvt Ltd Cambridge House, New Delhi, 2004.
3. Grewal, J.S., *The Sikhs of Punjab*. New Cambridge House, New Delhi, 2005
4. Rai Satya M. ,*Heroic Tradition in Punjab(1900-1947)*. Publication Bureau, Punjabi University, Patiala, 1978.
5. Singh, Fauja., *Freedom Struggle in Punjab*. Publication Bureau, Punjabi University, Patiala, 1974.
6. Singh, Fauja, *History and Culture of the Punjab*. Part II, Publication Bureau, Punjabi University, Patiala, 1987.
7. Singh, Kushwant, *A History of the Sikhs*. Vol. II (1839-1998), Oxford University Press, Delhi, 1991.
8. Yadav, K.C., *Haryana Aitihasik Simhavalokan* (Hindi). Haryana Sahitya Akademy, Chandigarh, 1991.

BACHELOR OF SCIENCE (ECONOMICS) Semester VI
Session 2020-21
ENGLISH (COMPULSORY)
Course Code: BECL-6212

COURSE OUTCOMES

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

CO1: analyze and appreciate the dramatic technique, plot development and art of characterisation in the prescribed plays

CO2: comprehend, appreciate and critically analyse the novel *Train to Pakistan* by Khushwant Singh.

CO3: enhance their reading and analysing power of texts through guided reading

CO4: develop skills for report writing and to write an essay on a given topic

BACHELOR OF SCIENCE (ECONOMICS) Semester VI
Session 2020-21
ENGLISH (COMPULSORY)
Course Code: BECL-6212

Max. Marks: 50

Examination Time: 3 Hrs **Theory: 40**

CA: 10

Instructions for the Examiner:

Section A: Three questions from the novel*Train to Pakistan* from Unit Iand three questions from *Glimpses of Theatre* from Unit IIrequiring very short answers will be set. The students would be required to answer any five, each carrying 2 marks (50 words each). **(5x2=10)**

Section B: Four questions requiring brief descriptive answers based on character, plot andtheme(s) in the novel*Train to Pakistan* from Unit Iwill be set and students would be required to attempt anytwo, each carrying 5 marks (250 words each). **(2x5=10)**

Section C: Four questions based on the central idea, theme, tone or style etc. of the prescribed plays from the textbook, *Glimpses of Theatre* from Unit IIwill be set for the students to attempt any two, each carrying 5 marks (250 words each). **(2x5=10)**

Section D: Two questions with internal choice will be set based on (a) Essay Writing, carrying six marks (word limit 300 words) (b) Report Writing, carrying four marks (word limit 200 words). **(1x6+1x4=10)**

Unit I

Train to Pakistan by Khushwant Singh

Unit II

Glimpses of Theatre
i) The Will
ii) Villa for Sale
iii) Progress
iv) The Monkey's Paw

Unit III

Essay Writing and Report Writing

Texts Prescribed:

1. *Train to Pakistan* by Khushwant Singh
2. *Glimpses of Theatre*, Guru Nanak Dev University Amritsar

Bachelor of Science (Economics) Semester–VI
Session- 2020-21
Course Title: Mathematics (Linear Algebra)
Course Code: BECM-6333(I)

COURSE OUTCOMES

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

CO 1: Express the algebraic concepts such as binary operation, groups, rings and fields.

CO 2: Define a vector space and subspace of a vector space.

CO 3: Check the linear dependence and linear independence of vectors.

CO 4: Describe the concepts of basis and dimension of vector spaces.

CO 5: Investigate properties of vector spaces and subspaces using linear transformation.

CO 6: Express linear transformations between vector spaces.

CO 7: Perform algebra operations between linear transformations.

CO 8: Find the matrix representing a linear transformation.

Bachelor of Science (Economics) Semester–VI
Session- 2020-21
Course Title: Mathematics (Linear Algebra)
Course Code: BECM-6333(I)

Examination Time: 3 Hours **Max. Marks: 50**
Theory:40
CA:10

Instructions for the paper setters:
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 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

Definition of groups, rings and fields with examples. Definition of a vector space, subspaces with examples. Direct sum of subspaces.Linear span, Linear dependence, Linear independence ofvectors.Linear combination of vectors.

Unit-II

Basis of a vector space, Finitely generated vector spaces. Existence theorem for basis. Invariance ofthe number of elements of the basis set. Dimension of sum of two subspaces. Quotient space and its dimension.

Unit-III

Linear transformation.Algebra of linear transformation.Rank-Nullity theorem, Isomorphism and Isomorphic spaces.

Unit-IV

Matrix of a linear transformation. Changes of basis, Linear operator.

Text Book:
1.Charles W.Curtis : Linear Algebra

Reference Books:
1. Surjit Singh: Linear Algebra, Vikas Publishing ,1997.
2. V. Krishnamurthy, V. P. Mainra andJ.L. Arora:An Introduction to Linear Algebra, East WestPress, 1976.
3. Shanti Narayan & P.K. Mittal: A Text Book of Matrices, 10th Edition (2002), S.Chand& Co.

Bachelor of Science (Economics) Semester–VI
Session- 2020-21
Course Title: Mathematics (Numerical Analysis)
Course Code: BECM -6333(II)

COURSE OUTCOMES

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

CO 1. Perform computation for solving a system of equations.

CO 2. Understand its application in all branches of engineering.

CO 3. Know how to find the roots of transcendental equations.

CO 4. Learn how to interpolate the given set of values.

CO 5. Understand the curve fitting for various polynomials .

CO 6. Learn numerical solution of differential equations.

CO 7. Compute numerical integration and differentiation, numerical solution of ordinary differential equations.

Bachelor of Science (Economics) Semester–VI
Session- 2020-21
Course Title: Mathematics (Numerical Analysis)
Course Code: BECM -6333(II)

Examination Time: 3 Hours **Max. Marks: 50**
Theory:40
CA:10

Instructions for the Paper Setter: Eight questions of equal marks 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

Error generation, propagation, error estimation and error bounds, Solution of non-linear equations, Bisection method, Iteration method, Newton's Method, Generalized Newton's Method, Method of false position, Muller's method, Rate of convergence of these methods.

Unit-II

Solution of linear system of equation; Direct method, Gauss elimination variant (Gauss Jordan and Crout reduction), Triangular Method, Iterative Method, Jacobi's Method, Gauss Seidel Method. Finite Differences: Forward, Backward, Central, Divided differences, shift operator, relationship between the operators and detection of errors by use of difference operator. Interpolation with divided difference, Newton's formula, Lagrangian Method.

Unit-III

Finite difference interpolation, Gauss formula, Stirling formula, Bessel's formula, Error Estimation Extrapolation. Numerical differentiation, Method based on interpolation. Numerical Integration, Trapezoidal rule, Simpson's rule, Weddle rule, Romberg Integration, Gaussian integration method, Gaussian legendre integration. Double numerical integration.

Unit-IV

Numerical solution of ordinary differential equations, Initial value problem, Taylor's method, Euler's methods, Picard's method, Milne's Method, Runge-Kutta Method.Predictor-Corrector's Method.

Text Book:

1. Iyenger, S. R. K., R. K. Jain, and Mahinder Kumar. Numerical Methods for Scientific and Engineering Computation. Delhi: New Age International Publishers, 2012.

Bachelor of Science (Economics)Semester–VI
Session 2020-21
Course Code: BECL-6453
Quantitative Techniques-VI

COURSE OUTCOMES

After passing this course students will be able to:

CO1: understand the nature and methodology of econometrics.

CO2: understand the OLS procedure of estimation of model and problems associated with it.

CO3: understand basics of estimation of models with lags

Bachelor of Science (Economics)Semester–VI
Session 2020-21
Course Code: BECL-6453
Quantitative Techniques-VI

Time: 3 Hours **Max. Marks: 100**
Theory: 80
CA: 20

Note: Instructions for the Paper–Setters:
Two questions, each carrying 16 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.

Unit – I

Definition, Scope and Nature of Econometrics. Simple Linear Regression Model (OLS method) with applications

Unit – II

General Linear Regression Model, assumptions, properties (BLUE). Gauss-Markov Theorem (Two Variable and K-variable), Concepts of R2 and Adjusted R2 , Test of Significance (Stress onNumericals), Estimation of regression using SPSS and Interpretation of Output .

Unit – III

Econometric Problems of Heteroscedasticity and Multicollineraity in the Regression Analysis: Sources, Consequences, Tests and Remedial Measures. Specification Bias.

Unit – IV

Problem of Auto-Correlation in the Regression Analysis: Sources, Consequences, Tests and Remedial Measures. Distributed Lag Models and Auto-Regressive Models (Introductory). Dummy Variable Technique and its Uses.

Suggested Readings:
1. Madnani GMK, 2015, *Introduction of Econometrics,* Oxford and IBH Publishing, N. Delhi.
2. Koutsoyiannis, A, *2001, Theory of Econometrics,* The Macmillan Press Ltd., London.

Bachelor of Science (Economics) - Semester–VI
(Session 2020-21)
COURSE CODE:BECM-6134

COMPUTER SCIENCE
(INFORMATION TECHNOLOGY)

Course Outcomes:

After passing course the student will be able to:

CO1: Identify usage of various communication media.

CO2: Describe, contrast and compare different types of Operating System.

CO3: Acquaint the usage of various information systems.

CO4: Comprehend client and server model.

CO5: Identify different career opportunities in IT field.

Bachelor of Science (Economics) - Semester–VI
(Session 2020-21)
COURSE CODE:BECM-6134

COMPUTER SCIENCE
(INFORMATION TECHNOLOGY)
(Theory)

Examination Time: (3+3) Hrs. **Max. Marks: 100**
Theory: 50
Practical: 30
CA: 20

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. The students can use only Non–programmable & Non–storage type calculator

UNIT–I

Data & Network Communication: Communication media: Twisted pair, Coaxial, Fiber optics, Wireless (Line of Sight & Satellite), Network Advantages, Types & Topologies, Communication using Network protocol/Network Interface card (NP/NIC), Transmission & Communication protocol/protocol (TCP/IP), Moderns

UNIT–II

Internet : Internet basics**,** its uses and applications. System Development Process & System development Tools.
Information Technology: Introduction to IT & its components, Information systems, Components of Computer based information systems.

UNIT–III

Information Systems: Management Information System, Decision Support System, Expert System, Functional information System, Transaction Processing System.
Careers in Computers: Role of Programmers, Program analysis, System Analyst, System Administrators, System Managers, System Integrators, DTP Manager & Administrators, MIS Director.

UNIT–IV

Operating Systems: Types of Operating systems: Multiuser, Multitasking & Multiprogramming and their examples.
Linux Commands : alias,cat,cd,chmod,chown,curl,df,echo,exit,find,free,whoami,grep ,cal, who, pwd etc.
Fundamental of Client Server: Basics of Client Server model and its applications. Designing a Client Server model by Creating Database Server and networking O.S. Server.

References/Textbooks:
1. Peter Norton, Introduction to Computers, McGraw Hill (2017), 7th edition.
2. Patrick, G.Mckeown, Living with the Computers, Harcourt College Pub (1990) 3rd edition.
3. Hussain & Hussain, Computer: Technology, Applications & Social Implications, PHI Learning (2006)

4. Behrouz A. Forouzan, Data Communications & Networking, McGraw-Hill Education (2012), 5th edition.
5. Andrew S. Tanenbaum, Computer Network, Prentice Hall (2010), 5th edition.
6. Abraham Silberschatz, Greg Gagne, Peter B. Galvin, Operating System Concepts, Wiley Publishers (2018), 10th edition.
7. YashavantKanetkar, Unix Shell Programming, BPB Publications (2003), 1st edition.

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COURSE CODE:BECM-6134

COMPUTER SCIENCE
(INFORMATION TECHNOLOGY)
(PRACTICAL)

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Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

Lab based on Information Technology

Bachelor of Science(Economics) Semester VI
(Session 2020-21)
COURSE CODE: BECM-6124

COMPUTER APPLICATIONS (VOCATIONAL)
(BUSINESS DATA PROCESSING)

Course Outcomes:

After passing course the student will be able to:

CO1: Identify the impact of data and information on working of various organizations.

CO2: Comprehend different types of Data Processing Methods.

CO3: Design triggers and cursors in database management system.

CO4: Apply function and formulas in spreadsheets for data processing.

Bachelor of Science(Economics) Semester VI
(Session 2020-21)
COURSE CODE: BECM-6124

COMPUTER APPLICATIONS (VOCATIONAL)
(BUSINESS DATA PROCESSING)
(Theory)

Examination Time: (3+3) Hrs. **Max. Marks: 100**
Theory: 50
Practical: 30
CA: 20

Instructions for the Paper Setters:–
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 Data Processing.
Need of Computers in Business.
Characteristics of Business Organization and Use of computers in various work areas of business like: Payroll System, Inventory Control, Online Reservation, Computer in Banks and Computer Application in Educational Institutions

UNIT–II

Data Processing Methods: Batch Processing, Online Systems, Time Sharing, Real Time Systems and Distributed Processing
File Organization: Types of Files (Master, Transaction, Work, Backup, Audit Files), File Organization (Serial, Sequential, Indexed Sequential, Direct Assess Files).

UNIT–III

Spreadsheets (Data Analysis Package): Introduction to Spreadsheets, Creating a simple worksheet, Computations in a Worksheet, Printing the Worksheet, Graphs and What if Analysis (Data sort, fill, query, filter)
Iterative controls: Simple Loops (Loop–end loop), Numeric FOR Loops and While Loops
Introduction and Advantages of procedures and functions with examples.

UNIT–IV

Introduction to database Triggers: Creation a database trigger with example, Enable and disable database trigger and Drop a database trigger
Introduction to Cursors: Types of Cursors, General Cursor attributes, Implicit Cursors, Explicit Cursors: Declaring an Explicit Cursor, Opening an Explicit Cursor, Fetching Records, Closing the Cursor.

References:

1. Murdick& Ross, Introduction to Management Information Systems, Prentice Hall (1977).
2. Muneesh Kumar, Business Information Systems, Vikas Publishing (1998), 1st edition.

3. Silberschatz, Korth&Sudarshan, Database Systems Concepts, McGraw-Hill Inc.(2020), 7th edition.
4. Anshuman Sharma, Fundamentals of DBMS, Lakhanpal Publishers (2016), 4th edition.
5. Rachhpal Singh, Gurvinder Singh, Windows based computer courses, Kalyani Publishers (2011).
6. Peter Norton, Introduction to Computers, McGraw Hill Education (2017), 7th edition.

Bachelor of Science(Economics) Semester VI
(Session 2020-21)
COURSE CODE: BECM-6124

COMPUTER APPLICATIONS (VOCATIONAL)
(BUSINESS DATA PROCESSING)
(PRACTICAL)

Examination Time: (3+3) Hrs.

Max. Marks: 100
Theory: 50
Practical: 30
CA: 20

Practical Based on Data Processing

Bachelor of Science (Economics) (Semester –VI)
Session 2020-21
Course Code: BECL-6175
QUANTITATIVE METHODS FOR ECONOMISTS

Course Outcomes:

After passing this course students will be able to:

CO1: Learn basic tools of mathematics and statistics .

CO2: Develop analytical and interpreting skills.

CO3: Understand the appropriate methods for forecasting and estimation .

Bachelor of Science (Economics) (Semester –VI)
Session 2020-21
Course Code: BECL-6175
QUANTITATIVE METHODS FOR ECONOMISTS

Time: 3 Hours **Max. Marks: 100**
Theory: 80
CA: 20

Note: Instructions for the Paper–Setters:
Two questions, each carrying 16 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.

UNIT–I
Sets, Relations and functions, Derivative of simple functions only (excluding log & exponential functions).Maxima/Minima for single variable functions.Introduction to Matrices - definition, properties & inverse.

UNIT–II
Measures of Central Tendency — Mean, Mode, Median and Geometric Mean; Measures of Dispersion.

UNIT–III
Concepts and Measure of Skewness and Kurtosis: Boyle's & Karl Pearson's measures. Simple Correlation & Regression (ungrouped & grouped data).

UNIT–IV
Interpolation: Concepts and Methods — Binomial expansion, Newton and Lagrange's Method (with emphasis on missing values only). Price Index Numbers–Weighted and Unweighted Index Numbers, various formulae and consistency tests.

Recommended Texts

1. Gupta,S.P. (2014), *Statistical Methods*, Sultan Chand& Sons, New Delhi.
2. Gupta, S.C. (2018),*Fundamentals of Statistics*, Himalaya Publishing House, New Delhi
3. Elhance,D.N. and Elhance ,V. (2018),*Fundamentals of Statistics* , Kitab Mahal,Allahabad
4. Croxton, F.E.,Cowden D.J. and Klein. S. (1973), *Applied General Statistics,* 3rd. Ed., Prentice Hall of India, New Delhi.
5. Nagar, A.L. and Das, R.K. (1976), *Basic Statistics*, Oxford University Press, Bombay.
6. Aggarwal, C.S and Joshi, S.C.,*Mathematics for Students of Economics,* New Academic Publishing Co., Jalandhar