

Punyashlok Ahilyadevi Holkar Solapur University, Solapur



NAAC Accredited-2022
'B++' Grade (CGPA 2.96)

Name of the Faculty: Science and Technology

(As per New Education Policy 2020)

Syllabus: ENTREPRENEURSHIP

Name of the Course: B.Sc. I (Sem.-I and II)

(Syllabus to be Implemented from June - 2024)

Punyashlok Ahilyadevi Holkar Solapur University, Solapur
Structure as per NEP-2020
B. Sc. I (Entrepreneurship)

Level	Sem.	Faculty			OE/GE	(SEC/VSC)	(AEC), IKS, VEC	CC	Total Credits	Cumulative Credits
		Major		Minor						
		DS C	DSE	Minor						
4.5	I	2+2				2	2 - L1-1	2	22	44 UG Certificate
		2+2					2 - IKS ,			
		2+2					2 - VEC1			
	II	2+2			2	2	2 - L1-2	2	22	
		2+2					2- VEC 2			
		2+2								

SEM - I

S. No.	Course Type	Course Code	Paper Title	Credit
1.	Major	DSC 1 - 1	Entrepreneurship-I (Fundamentals of Chemistry)	2
2.	Major	DSC 2 - 1	Entrepreneurship-II (Fundamentals of Life Sciences)	2
3.	Major	DSC 3 - 1	Entrepreneurship-III (Fundamentals of Management)	2
4.	Practical based on DSC 1 - 1, DSC 2 - 1 & DSC 3 - 1	DSC 1 - 1 P DSC 2 - 1 P DSC 3 - 1 P	Practical Lab – I	6
5.	DSE	--	--	--
6.	Minor	--	--	--
7.	GE/OE	--	--	--
8.	SEC 1	SEC 1	Employability Skills	2
9.	AEC	L1-1	English	2
10.				
11.	IKS	IKS Major	Ancient Indian Science	2
12.	VEC 1	VEC 1	Constitution of India	2
13.	CC1	CC1	Community Engagement & Services	2
			Total	22
13	Major	DSC 1-2	Entrepreneurship-IV (Fundamentals of Microbiology)	2
14	Major	DSC 2-2	Entrepreneurship-V (Fundamentals of Biotechnology)	2
15	Major	DSC 3-2	Entrepreneurship-VI (Macroeconomic)	2
14.	Practical based on	Practical Lab - II	Practical Lab - II	6

	DSC 1-2, DSC 2-2 and DSC 3-2			
15	DSE	--	--	-
16	Minor	--	--	--
17.	GE1 /OE1	GE1 /OE1	Sales Management	2
18.	SEC 2	SEC 2	Entrepreneurial Best Practices	2
19.	AEC	L1-2	English	2
20.	VEC 2	VEC 2	Environmental Studies	2
21.	CC 2	CC 2	Community Engagement & Services	2
			Total	22

Abbreviations:

<p>OE: Generic/ Open Electives</p> <p>VSEC: Vocational Skill and Skill Enhancement Courses</p> <p>VSC: Vocational Skill Courses</p> <p>SEC: Skill Enhancement Courses</p> <p>AEC: Ability Enhancement Courses</p>	<p>OJT: On Job Training</p> <p>FP: Field projects</p> <p>CC: Co-curricular Courses</p> <p>RP: Research Project</p> <p>IKS: Indian Knowledge System</p>
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Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Faculty of Science and Technology

Final Structure as per NEP-2020

4- Year Multidisciplinary UG Program with DSC as a Major, 4 -Year Bachelor of Science(Honors)

Level/ Difficulty	Sem.	Faculty			Generic/ Open Elective GE/ OE	Vocational and Skill Enhancement Courses (SEC/VSC)	Ability Enhancement Course (AEC), IKS, VEC	Field Project/ RP/CC/Internship/ Apprenticeship/ Community Engagement & Services	Credits	Cumulative Credits
		Major		Minor						
		DSC	DSE							
4.5 100-200	I	DSC 1 - 1 (2 + 2) Entrepreneurship-I (Fundamentals of Chemistry)				SEC 1 (2) Employability Skills	L1-1(2) English IKS Major (2) (Ancient Indian Science) VEC1 (2) (Constitution of India)	CC1 (2) Community Engagement & Services	22	44 One Year Certificate (44)
		DSC 2 - 1 (2 + 2) Entrepreneurship-II (Fundamentals of Life Sciences)								
		DSC 3 - 1 (2 + 2) Entrepreneurship-III (Fundamentals of Management)								
	II	DSC 1-2 (2 + 2) Entrepreneurship-IV (Fundamentals of Microbiology)			GE1/ OE1(2) Sales Management	SEC 2 (2) Entrepreneurial Best Practices	L1-2(2) English VEC 2 (2) (Environmental Studies)	CC 2 Community Engagement & Services	2 2	
		DSC 2-2 (2 + 2) Entrepreneurship-V (Fundamentals of Biotechnology)								
		DSC 3-2 (2 + 2) Entrepreneurship-VI (Macroeconomic)								

NOTE:

1. OE-Each BOS will design Four OE (Open Elective) course for 1st to 4th semester each.
2. LI-English, L2-Marathi/Hindi (Introductory)
3. Value Added Course: 1. NCC/NSS/Sports/Cultural/MOOCs/SWAYAM/YOGA/Health and Wellness
4. IKS-Each BOS will design one IKS course.

Abbreviations:

Generic/ Open Electives: OE; Vocational Skill and Skill Enhancement Courses: VSEC; Vocational Skill Courses: VSC;
Skill Enhancement Courses: SEC; Ability Enhancement Courses: AEC; Indian Knowledge System: IKS;
Value Education Courses: VEC; OJT: On Job Training: Internship/ Apprenticeship: Field projects: FP;
Co-curricular Courses: CC; Community Engagement & Service: CEP RM: Research Methodology;
Research Project: RP

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

SYLLABUS FOR B.Sc.-I (Entrepreneurship)

CHOICE BASED CREDIT SYSTEM (CBCS) SYLLABUS

Structure of theCourse:

- Structure of B.Sc. course in faculty of science as 2 semesters for certificate course, 4 semesters for diploma, 6 semesters for B.Sc. degree and 8 semesters for B.Sc. (Hons.).
- B.Sc.-I comprises of total two semesters. Each theory paper consists of 30 marks for University examination and 20 marks for internal examination.
- **Practical examination will be conducted at the end of academic year (Sem. - I &II).**
- Each practical paper is of 30 marks for university practical examination and 20 marks For internal practical examination.
- The titles and marks distribution for each paper are as under.

Sem	Paper No.	Title of Paper	Total Lectures	Examination			Total Credit
				Univ. Exam	Internal Exam	Total Marks	
Sem I	Major						
	DSC 1 - 1	Entrepreneurship-I (Fundamentals of Chemistry)	30	30	20	50	02
	DSC 2 - 1	Entrepreneurship-II (Fundamentals of Life Sciences)	30	30	20	50	02
	DSC 3 - 1	Entrepreneurship-III (Fundamentals of Management)	30	30	20	50	02
	DSC 1 - 1 P	Practical Lab – I	04 hr /Week/ batch	30	20	50	02
	DSC 2 - 1 P	Practical Lab – I	04 hr /Week/ batch	30	20	50	02
	DSC 3 - 1 P	Practical Lab – I	04 hr /Week/ batch	30	20	50	02
	DSE	--	--	--	--	--	--
	Minor						
	Minor	--	--	--	--	--	--
	GE/OE	--	--	--	--	--	--
	SEC 1	Employability Skills	30	30	20	50	02
	L1-1	English	30	30	20	50	02
	IKS	Ancient Indian Science	30	30	20	50	02
	VEC 1	Constitution of India	30	30	20	50	02
	CC1	Community Engagement & Services	30	30	20	50	02
	Total credits						22
	Semester - II						
	Major						
DSC 1-2	Entrepreneurship-IV (Fundamentals of Microbiology)	30	30	20	50	02	
DSC 2-2	Entrepreneurship-V	30	30	20	50	02	

Sem II		(Fundamentals of Biotechnology)					
	DSC 3-2	Entrepreneurship-VI (Macroeconomic)	30	30	20	50	02
	DSC 1 - 2 P	Practical Lab – II	04 hr /Week/ batch	30	20	50	02
	DSC 2 - 2 P	Practical Lab – II	04 hr /Week/ batch	30	20	50	02
	DSC 3 - 2 P	Practical Lab – II	04 hr /Week/ batch	30	20	50	02
	DSE	--	--	--	--	--	--
	Minor						
	Minor	--	--	--	--	--	--
	GE1 /OE1	Sales Management	30	30	20	50	02
	SEC 2	Entrepreneurial Best Practices	30	30	20	50	02
	L1-2	English	30	30	20	50	02
	VEC 2	Environmental Studies	30	30	20	50	02
	CC 2	Community Engagement & Services	30	30	20	50	02
	Total credits						

- **University Examination**

1. Theory Paper DSC 1-1 Entrepreneurship – I (Fundamentals of Chemistry) : 30Marks
2. Theory Paper DSC 2-1 Entrepreneurship – II (Fundamental of Life Science) : 30Marks
3. Theory Paper DSC 3-1 Entrepreneurship – III (Fundamentals of Management)) : 30Marks
4. Theory Paper DSC 1-2 Entrepreneurship – IV (Fundamentals of Microbiology) : 30Marks
5. Theory Paper DSC 2-2 Entrepreneurship – V (Fundamentals of Biotechnology) : 30Marks
6. Theory Paper DSC 3-2 Entrepreneurship – VI (Macroeconomic)) : 30Marks

Practical paper has 30 marks for university practical examination. Duration of practical examination is **one day / practical paper**. There will be two practicals of 10 marks each for Major. Nature of practical question paper will be as follows.

<p>Semester I Practical Paper (Major) (Practical based on DSC 1 - 1, DSC 2 - 1 & DSC 3 - 1)</p> <p>30 Marks for each Practical paper</p>	<p>Semester II Practical Paper (Major) (Practical based on DSC 1-2, DSC 2-2 and DSC 3-2)</p> <p>30 Marks for each Practical paper</p>
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- **Continuous Internal Assessment:**

- 1) Each theory paper has **20 marks** internal examination.
- 2) Each Practical paper has **20 marks** internal examination.

Notes:

- FP/RP/CC/Internship/Apprenticeship/Community Engagement and Services is applicable as per the distribution of students.
- **Practical Examination will be conducted at the end of the year**

Program Outcomes (POs):

PO 1. Students will have a firm foundation in the fundamentals and applications of Entrepreneurship as well as biological sciences and scientific theories including those in Entrepreneurship, Chemistry, Microbiology and Biotechnology etc.

PO 2. Students will be able to design and carry out scientific experiments as well as accurately record and analyze the data of such experiments.

PO 3. Students will develop skill in problem solving, critical thinking and analytical reasoning as applied to scientific problems.

PO 4. Students will be able to explore new areas of research in allied fields of sciences and technology.

PO 5. Students will appreciate the central role of Entrepreneurship in our society

PO 6. Students will be able to explain how entrepreneur is an integral part for addressing social, economic, and environmental problems.

PO 7. Students will be able to function as a member of an interdisciplinary problem-solving team.

Program Specific Outcomes (PSOs):

PSO1: Apply the basic knowledge of chemistry, microbiology and biotechnology to perform various tasks assigned at the workplace.

PSO2: Undertake research activities and use modern scientific tools to analyze various topics in the research area.

PSO3: Use subject knowledge and ICT skills to be an effective team member in his/her field.

PSO4: Exhibit professional work ethics and norms of scientific development.

PSO5: Understand and contribute to solve basic societal issues based on principles of scientific knowledge he/she has gained.

PSO6: Practice the art of analytical reasoning to become lifelong learner.

SEMESTER-I

PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP), SEM-I
MAJOR COURSE NAME – DSC 1 - 1 ENTREPRENEURSHIP-I (FUNDAMENTALS OF CHEMISTRY) PAPER – DSC 1-1

Course Credits	No. of Hours per Week	Total No. of Teaching Hours	Total marks
2 Credits	2 Hours	30 Hours	50

Learning Objectives:

- To know the different laws of ideal and non-ideal gases.
- To achieve knowledge of the gases states such as ideal and non-ideal gases, isotherm, and liquefaction of gases.
- To acquire knowledge of quantum mechanics, shapes of orbitals and periodic properties.
- To gain knowledge of ionic and covalent bonding.

Course Outcome: After successful completion of this course, students are able to:

CO1: Get a better understanding of gaseous state.

CO2: Explain the deviations of gases from ideality

CO3: Know the atomic structure and periodic properties and trends; types of chemical bonding.

CO4: Understand the general electronic configuration of s and p block elements.

CO5: Understand the basics of bonding and able to draw correct structure of any organic molecule and comment on its stability.

CO6: Able to predict the reactivity of organic molecules by the help of electronic effects and imagine 3D structure of organic molecules.

Unit I	A. Gaseous State:	07
	<ul style="list-style-type: none">● Ideal and Non ideal gases, Deviation from ideal behavior. (Only Boyle's law), Causes of deviation from ideal behavior, van der Waal's equation, explanation of real gas behavior by van der Waal's equation.● Critical Phenomena: PV- Isotherms of real gases (Andrew's isotherms), continuity of state, Relationship between critical constants and Vander Waal's constants.● Liquefaction of gases, Joule-Thomson effect.● Numerical Problems	
	B. Atomic Structure and periodic properties	08
	<ul style="list-style-type: none">● Atomic Structure: What is Quantum mechanics? Time independent Schrodinger equation and meaning of various terms in it. Significance of ψ and ψ^2 (Derivation not expected) Quantum numbers; Shapes of s, p, d orbitals Aufbau and Pauli's exclusion principle, Hund's rule of maximum multiplicity Stability of half-filled and completely filled orbitals, exchange energy General electronic configuration of s and p block elements	

	<ul style="list-style-type: none"> ● General Characteristics of s and p block elements w.r.t. Atomic and Ionic radii, Ionization energy, Electron affinity, Electronegativity, Reactivity, Melting and Boiling point ● Types of chemical bonding: Ionic, Covalent, Co-ordinate, Metallic, Hydrogen bonding and Weak Chemical Forces: van der Waal's forces, dipole-dipole interactions, induced dipole interactions, Instantaneous dipole-induced dipole interactions (Illustration with suitable examples and its implications). 	
Unit II	A. Fundamentals of organic reaction mechanism	08
	<ul style="list-style-type: none"> ● Introduction of reaction mechanism. ● Types of arrow notations: Single headed curved arrow, Half headed curved arrow and double headed arrow. ● Types of bond breaking: Homolytic and Heterolytic ● Types of reagents: Electrophilic and Nucleophilic ● Types and sub-types of following organic reactions with definition and at least one example of each. a) Substitution b) Addition c) Elimination d) Rearrangement. (Mechanism is not expected) ● Reactive Intermediates: Carbocations, Carbanions, Carbon free radicals, Carbenes, Nitrenes (Definition with suitable example, formation, structure, and relative stability) 	
	B. Structure and Bonding	07
	<ul style="list-style-type: none"> ● Hybridization: sp^3, sp^2 and sp w.r.t. methane, ethylene and acetylene respectively ● Bond length, Bond angle and Bond energy with factors affecting these properties w.r.t. sp^3, sp^2 and sp hybridization. ● Resonance effect w.r.t. phenol and nitrobenzene ● Inductive effect, +I and -I ● Strength of carboxylic acid w.r.t. inductive effect: Examples-a) Formic and acetic acid, b) monochloro, dichloro and trichloro acetic acid ● Hyperconjugation w.r.t. toluene ● Steric effect w.r.t. mesitoic acid 	

Reference Books:

1. Advanced Inorganic Chemistry – Cotton and Wilkinson
2. Inorganic Chemistry - J. E. Huheey
3. Concepts and models of Inorganic Chemistry-Douglas&Mc-Daniel
4. Principles of Inorganic Chemistry-Puri, Sharma
5. New Concise Inorganic Chemistry-(ELBS)- J. D. Lee
6. Elements of Physical Chemistry: S. Glasstone and D. Lewis (D. Van Nostrand Co. Inc)
7. Physical Chemistry: W. J. Moore (Orient Longman)
8. Principles of Physical Chemistry: Maron Prutton
9. University Chemistry: B. H. Mahan (Addison – Weseley Publ. Co.)
10. Chemistry Principle & Applications: P. W. Atkins, M. J. Clugsto, M. J. Fiazer, R. A. Y. Jone

(Longman)

11. Physical Chemistry: G. M. Barrow (Tata Mc-Graw Hill)

12. Essentials of Physical Chemistry: B.S. Bahl & G. D. Tuli (S. Chand)

13. Organic Chemistry: Hendrickson, Cram, Hammond. Organic Chemistry: Morrison and Boyd.

PRACTICALS RELATED TO DSC 1 - 1

**PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP), SEM-I
PRACTICALS RELATED TO DSC 1-1 P
ENTREPRENEURSHIP PRACTICAL-I (CHEMISTRY)**

Course Credits	No. of Hours per Week/Batch	Total No. of Teaching Hours	Total marks
2 Credits	4 Hours	--	50(30+20)
Sr.No	Chemistry Practical's (Any 10)		
1	Calibration of burette, pipette and beryl pipette		
2	Preparation of 100 ml of 0.1 N KMnO ₄ and its standardization.		
3	Preparation of 0.1 N HCl by density calculation & its standardization.		
4	Study of flash point & fire point of given solvent fuel.		
5.	Viscosity measurement using Oswald's Viscometer		
6	To determine the strength of aniline in the given solution in g/dm ³		
7	Study of soaping point.		
8	Preparation of m-dinitrobenzene		
9	Preparation of nitro derivative of salicylic acid.		
10	Separation of amino acids by thin layer chromatography		
11	Determination of hardness of water.		
12	Determination of D.O.		
13	Determination of acidity, alkalinity of water		
14	Determination of saponification value of oil		
15	Determination of acid value in bleaching powder		
16	Determination of available chlorine in bleaching powder		
17	Determination of chloride in water by Mohr's method.		
18	Determination of heat solution of CuSO ₄		
19	Estimation of iron from the cement (Volumetrically)		
20	Separation of metal ions (Cu ⁺² , Co ⁺² , Ni ⁺²) by paper chromatography.		

21	Kinetics of 1st and 2nd Order reaction.
22	Density of given liquid by Pyknometer.

PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP), SEM-I
MAJOR COURSE NAME – DSC 2 - 1
ENTREPRENEURSHIP- II (FUNDAMENTALS OF LIFE SCIENCE)

Course Credits	No. of Hours per Week	Total No. of Teaching Hours	Total marks
2 Credits	2 Hours	30 Hours	50

Learning Objectives:

1. To acquire knowledge of fundamentals of biology.
2. To gain knowledge of cell Organelle its structure and function.
3. To acquire the knowledge of Genetics.
4. To understand how the cell divides and functions

Course Outcomes:

After completion of the course, the students will be able to;

1. Know the structure and distinguish properties of cell.
2. Explain various metabolic activities of the cell.
3. Understand the Mendelian Genetics.
4. Describe the physiological regulation of cell.

Unit I	<p>1. Cell structure and Function: Introduction and classification of organisms by cell structure, cytosol, compartmentalization of eukaryotic cells, cell fractionation. Cell Membrane and Permeability: Chemical components of biological membranes, organization and Fluid Mosaic Model, membrane as a dynamic entity, cell recognition and membrane transport. Structure and function of microtubules, Microfilaments, Intermediate filaments. Structure and Function of Cell organelle – Endoplasmic reticulum, Golgi apparatus, Lysosome, Chloroplast, Mitochondria, ribosome, vacuoles.</p>	15
	<p>2. Cell growth: Concept of cell growth and differentiation, Cell cycle and division: Events of cell cycle, Mitosis, and Meiosis; Cell synchrony and its applications, Cell senescence, Apoptosis</p>	
Unit II	<p>1. Mendelian genetic - Introduction, Mendel's experiment, Monohybrid and Dihybrid crosses, Genotypic and phenotypic ratio, Law of Dominance, Law of Independent assortment, Law of Co-dominance and Incomplete dominance.</p> <p>2. Chromosome - Structure of Chromosome and Types of chromosomes, Chromosomal aberration Translocations, inversions, deletions and duplications. Mutation- Definition, Mutagenic agent, Induced and Spontaneous mutation.</p>	15
	<p>3. Linkage: Introduction, types, phases linkage group detection of linkage</p>	

	significance, crossing over: features, theories types, factors affecting crossing over. Transposable elements: -definition, types	
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Reference Books:

1. Karp, G. 2010. Cell and Molecular Biology: Concepts and Experiments. 6th Edition. John Wiley & Sons. Inc.
2. De Robertis, E.D.P. and De Robertis, E.M.F. 2006. Cell and Molecular Biology. 8th edition. Lippincott Williams and Wilkins, Philadelphia.
3. Cooper, G.M. and Hausman, R.E. 2009. The Cell: A Molecular Approach. 5th edition. ASM Press & Sunderland, Washington, D.C.; Sinauer Associates, MA.
4. Becker, W.M., Kleinsmith, L.J., Hardin. J. and Bertoni, G. P. 2009. The World of the Cell. 7th edition. Pearson Benjamin Cummings Publishing, San Francisco.
5. Molecular Biology of Gene – J.D. Watson
6. Genetics: Principles and Analysis; Fourth Edition; Daniel L. Hartl; Jones Bartlet Publishers.
7. Genetics – B. D. Singh; Kalyani Publication
8. Principles of Genetics – E. J. Gardner; John Willey & Sons, New York.
9. Molecular Biology – P. K. Gupta
10. Genetics – M. W. Strickberger; Macmillan Publication.

PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP) SEM-I			
PRACTICALS RELATED TO DSC 2 - 1 P			
ENTREPRENEURSHIP PRACTICAL - II (LIFE SCIENCE)			
Course Credits	No. of Hours per Week/Batch	Total No. of Teaching Hours	Total marks
2 Credits	4 Hours	--	50 (30+20)
Sr.No	Biology Practicals		
1.	Study of animal cell and plant cell structure under microscope.		
2.	Isolation of chloroplast from plant material.		
3.	Observation of mitochondria under microscope by Janus Green B staining method.		
4.	Study of cell division under microscope (mitosis / meiosis)		
5.	Measurement of cell size by micrometry.		
6.	Problem based on Mendelian genetics – <ul style="list-style-type: none"> ● Law of dominance – ● Law of Segregation – ● Law of Independent Assortment 		

7.	Isolation of Bacteriophage
8.	Study of Mendelian Traits
9.	Preparation of Salivary Gland Chromosome.
10.	Identification of mutant phenotypes- Body shape / nature of wings / eye colour in Drosophila

PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP), SEM-I
MAJOR COURSE NAME - DSC 3 – 1:
ENTREPRENEURSHIP- III (FUNDAMENTALS OF MANAGEMENT)
PAPER - DSC 3-1

Course Credits	No. of Hours per Week	Total No. of Teaching Hours	Total marks
2 Credits	2 Hours	30 Hours	50
Learning Objectives:			
1. To learn basic concepts and principles of management practices required to run an organization.			
2. To develop knowledge and skills regarding functions of Management			
Course Outcomes (Cos)			
CO1: Learners will absorb various management concepts such as planning, organizing, implementing, staffing, coordinating, controlling, motivating.			
CO2: Learners will recognize the human skills and conceptual skills as per industry requirements about basic management skills.			
CO3: Learners will diagnose various styles and qualities of efficient leadership, Coordination, Controlling, Green Management and Corporate Social Responsibility.			
Unit I	Introduction to Management		15
	<ul style="list-style-type: none"> ● Management: Meaning, Concept, Importance and Functions ● Nature of Management: Management is an Art, Science and Profession ● Levels of Management ● 14 Principles of Management ● Management vs Administration 		
Unit II	Functions of Management		15
	<ul style="list-style-type: none"> ● Planning: Meaning and Features and Types ● Organizing: Meaning, Principles and Process ● Decision making: Meaning Types and Process ● Directing: Concept, Techniques and Principles ● Controlling: Meaning, Process and Limitations 		

Reference Books

1. James H. Donnelly, (1990) Fundamentals of Management, Pearson Education, 7th Edition.
2. Koontz and Heinz Wehrich (2017), Essentials of Management: An International and Leadership Perspective, McGraw Hill Education, 10th Edition.
3. Mitra J.K. (2018). Principles of Management. Oxford University Press
4. Dr. Mangesh P. Waghmare (2019) Principles of Management, Nirhali Prakashan Pune.
5. Rajkumar. S and Nagarajan. G (2021) Management Principles and Applications, Jayvee International Publications, Bangalore.
6. Drucker, P. F. (1999). Management Challenges for the 21st Century. Harper Collins Publishers Inc Harold.

7. J.S. Chandan (2002) Management Concepts and Strategies Vikas Publishing House, Pvt. Ltd New Delhi.

PRACTICALS
PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP) SEM-I
PRACTICALS RELATED TO DSC 3-1 P
ENTREPRENEURSHIP PRACTICAL - III (FUNDAMENTALS OF MANAGEMENT)

Course Credits	No. of Hours per Week/Batch	Total No. of Teaching Hours	Total marks
2 Credits	4 Hours	--	50(30+20)
Sr.No.	Practical/Assignment/Exercise/Activity		
1	Conduct the survey on controlling techniques used in local firms.		
2	Conduct survey on application of 14 principles of management in local business.		
3	Collect the organizational structure of any 5 new startups in Solapur		
4	Conduct survey on decision making process of any local business		
5	To study the leadership strategies of top-level managers working in local industries.		
6	Visit and write report on the organizational structure of any successful local business		
7	Interview of any top-level manager of reputed local successful business firm.		
8	Industrial Visit & prepare a report of vision, mission, and objectives of any local reputed business.		
9	To make mini project/survey on any relevant topic of the course		

PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP), SEM-I
COURSE NAME – SEC 1 EMPLOYABILITY SKILLS

Course Credits	No. of Hours per Week	Total No. of Teaching Hours	Total marks
2 Credits	2 Hours	30 Hours	50
<p>Learning Objectives –</p> <ol style="list-style-type: none"> 1. Directives and specifications of working in a professional environment. 2. Acquire respectful and polite workplace etiquettes. 3. The objective of the course is to train the students with the essential skills required for enhancing employability prospects in the Job Market. <p>Course Outcomes (Cos)</p> <p>CO1: Students will understand the soft skills and its applications in terms of behavioral skills, technical skills and Etiquettes.</p> <p>CO2: Students will be able to learn all professional skills necessary for the sake of employability and Gain employability skills.</p> <p>CO3: Procure successful career. Being an aware, respectful, and well-cultivated employee.</p>			
Unit I	Self-Awareness and Time Management		15
	<ul style="list-style-type: none"> ● Self-Awareness: - Introduction, Importance of knowing yourself, ● Process of knowing yourself ● SWOT analysis grid ● Johari Windows ● Time Management: - Introduction, Time Management Matrix ● Steps to successful time management ● Difficulties in time management, Time wasters and Time savers. 		
Unit II	Self-Etiquettes and Goal Settings		15
	<ul style="list-style-type: none"> ● Etiquettes: - Introduction, benefits of etiquette, ● Classification of etiquette. ● Goal Setting: - Difference between wishes, dreams & goals ● Types of goals, benefits & areas of goals, ● SMART goals. Exercise on goal setting. 		

Reference Books:

1. Soft Skills: Know Yourself and Know the World, Dr. K Alex, S. Chand & Company Pvt. Ltd., New Delhi
2. Managing Soft Skills for Personality Development, B.N. Ghosh, McGraw Hill Education (India) Pvt. Ltd. New Delhi
3. Skills for All – Dr. R.B. Rao & Dr. S. Subbarao –Satyam Publishers & Distributors, Jaipur
4. Essential Communication Skills, Shalini Agarwal, Ane Books Pvt.Ltd.

IKS			
PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP), SEM-I			
IKS COURSE NAME – ANCIENT INDIAN SCIENCE			
Course Credits	No. of Hours per Week	Total No. of Teaching Hours	Total marks
2 Credits	2 Hours	30 Hours	50
Learning Objectives:			
<ol style="list-style-type: none"> 5. To acquire knowledge of ancient agriculture process. 6. To gain knowledge of Traditional Ayurveda & plant-based medicine. 7. To acquire the knowledge of Textile process. 8. To understand how the fabric dyeing process 			
Course Outcomes:			
After completion of the course, the students will be able to;			
<ol style="list-style-type: none"> 1. Understand the ancient Agriculture processes. 2. Know the Traditional agricultural practices 3. Know the history of textile trade 4. Understand the textile processing 			
Unit I	1. Ancient Indian Science:		15
	<p>Agriculture in India: krishisuktas, Krishiparashara, Brihatsamhita, Types of crops, Manures, Types of land- devamatruka, nadimatruka, use of animals in warfare, animal husbandry, Animals for medicines.</p> <p>Traditional agricultural practices, Traditional water-harvesting practices, Traditional Livestock and veterinary Sciences Traditional Houses & villages, Traditional Forecasting, Traditional Ayurveda & plant-based medicine, Traditional writing Technology.</p>		
Unit II	Textile Chemistry:		15
	<ol style="list-style-type: none"> 1. Textiles: History, role of India in global textile trade, current market potential 2. Fibers: Definition, classification of textile fibers according to their nature and origin, physical and chemical properties, comparison of natural and man-made fibers, structure and properties of cotton jute, linen, wool, silk, bast and leaf fibers and other natural fibers. 3. Textile Processing: Sizing, Bleaching, Dyeing, spinning and weaving of fibers. (Brief introduction of old methods). 		

Reference Books:

1. Basics of Textile Chemical Processing by D. Gopalakrishnan and T. Karthik, ASTRAL, 2016
2. Textile Chemistry by Vishu Arora, Abhishek Publications, 2011
3. Chemistry for Textile Students by Barker North, Read Books Publications, 2007
4. Introduction to Industrial Chemistry by B. K. Sharma: Goel Publishing, Meerut (1998)
5. Chemical Technology in the Pre-treatment Processes of Textiles by S.R. Karmakar, 1999
6. Fundamentals of Textile and their care, Dantyaagi S, Orient Longman Publication, 2006
7. Textbook on IKS by Prof. B Mahadevan, IIM Bengaluru.

VEC 1	VEC 1	Constitution of India
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CC1	CC1	Community Engagement & Services
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SEMESTER – II

PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP), SEM-II			
MAJOR COURSE NAME – ENTREPRENEURSHIP – IV (FUNDAMENTALS OF MICROBIOLOGY)			
PAPER- DSC 1-2			
Course Credits	No. of Hours per Week	Total No. of Teaching Hours	Total marks
2 Credits	2 Hours	30 Hours	50
<p>Learning Objectives:</p> <ol style="list-style-type: none"> 1. To inculcate the detailed basic understanding on the fundamental aspects of microbiology. 2. To describe diversity of microorganisms, bacterial cell structure and function, microbial growth. 3. To understand the general characteristics of microorganism with economic importance. 4. To understand microbial techniques for isolation of pure cultures of bacteria. 5. To know the various physical and chemical growth requirements of bacteria. <p>Course Outcome: After the end of the course, student can:</p> <p>CO1: Understand the diversity in microbiology.</p> <p>CO2: Able to know the general characteristics of Bacteria, fungi, algae.</p> <p>CO3: Preparation and use of culture media, Pure culture and cultural characteristics microbes.</p> <p>CO4: Understand the various methods for their isolation, detection and identification of microorganisms.</p> <p>CO5: Able to understand growth phases – kinetics, asynchronous, synchronous.</p> <p>CO6: Able to distinguish between Prokaryotic & Eukaryotic cell.</p>			
Unit I	<p>History and Development of Microbiology:</p> <p>A) Development of microbiology as a discipline (Robert Hook)</p> <p>B) Spontaneous generation vs. biogenesis. Contributions of Anton von Leeuwenhoek, John Needham, Louis Pasteur & John Tyndall.</p> <p>C) Golden era of microbiology (Role of microorganisms in fermentation, Germ theory of disease and concept of Immunology and medical microbiology and immunology through the work of Joseph Lister and Edward Jenner.</p> <p>D) General Characteristics of Microorganism with Economic Importance i) Acellular microorganisms- Viruses ii) Cellular microorganisms (Bacteria, Algae, Fungi and Protozoa) iii) Difference between Prokaryotic & Eukaryotic cell</p>		15
Unit II	<p>Microbial nutrition, growth and their control.</p> <p>A) Microbial Nutrition i) Components of media with their functions. ii) Types of culture media a) Non-living media. Natural, Synthetic and semi synthetic media, enrichment media, selective and differential media. b) Living media- Eggs, cell lines and animals.</p>		15

	<p>B) Microbial Growth: Definition of growth, Bacterial growth curve, synchronous growth and diauxic growth.</p> <p>C) Cultivation, isolation and preservation techniques of Microorganisms: i) Biochemical tests (characteristics): IMViC (Indole, Methyl red, Vogues Prouskers and Citrate utilization), Urea and gelatin hydrolysis. ii) Definition and methods of Pure culture. Streak plate, pour plate and Spread plate. iii) Measurement of growth: Direct method- DMC, Indirect Methods- SPC and Membrane filter technique. iv) Maintenance and preservation</p>	
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Reference Books:

1. Tortora GJ, Funke BR and Case CL. (2008). Microbiology: An Introduction. 9th edition. Pearson Education
2. Madigan MT, Martinko JM, Dunlap PV and Clark DP. (2014). Brock Biology of Microorganisms. 14th edition. Pearson International Edition
3. Cappucino J and Sherman N. (2010). Microbiology: A Laboratory Manual. 9th edition. Pearson Education Limited
4. Wiley JM, Sherwood LM and Woolverton CJ. (2013) Prescott's Microbiology. 9th Edition. McGraw Hill International.
5. Atlas RM. (1997). Principles of Microbiology. 2nd edition. W.M.T. Brown Publishers.
6. Pelczar MJ, Chan ECS and Krieg NR. (1993). Microbiology. 5th edition. McGraw Hill Book Company.
7. Stanier RY, Ingraham JL, Wheelis ML, and Painter PR. (2005). General Microbiology. 5th edition. McMillan Stereochemistry of Organic Chemistry: Kalsi

PRACTICALS (MAJOR) PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP), SEM-II PRACTICALS RELATED TO DSC 1-2 P ENTREPRENEURSHIP PRACTICAL – IV (MICROBIOLOGY AND BIOTECHNOLOGY)			
Course Credits	No. of Hours per Week/Batch	Total No. of Teaching Hours	Total marks
2 Credits	4 Hours	--	50(30+20)
Sr.No.	Practical/Assignment/Exercise/Activity		
1	Isolation of bacteria using Streak plate technique		
2	Isolation of bacteria using Spread plate technique		
3	Microscopic examination of micro-organisms-Simple, Gram's staining, Motility,		
4	Lactophenol cotton blue staining (Fungi)		
5.	Biochemical Characterization of Bacteria		
6	Qualitative tests for Carbohydrates		
7	Separation of amino acids by Paper Chromatography		
8	Estimation of Protein by Lowry's method		

9	Estimation of blood glucose by folin-Wu method
10	Estimation of DNA by DPA method
11	Estimation of acid value of lipids
12	Estimation of RNA by Orcinol method
13	Determination of Haemoglobin
14	Qualitative analysis of carbohydrates
15	Qualitative analysis of amino acids
16	Qualitative analysis of lipids
17	Determination of titration curve of amino acids
18	Determination of titration curve of amino acids
19	Estimation of protein by biuret method
20	Estimation of blood urea level by DAM method
21	Estimation of DNA by spectroscopy method
22	Estimation of blood cholesterol by Zak's method

PROGRAMME NAME B. Sc. I (ENTREPRENEURSHIP), SEM-II			
MAJOR COURSE NAME – ENTREPRENEURSHIP - V (FUNDAMENTALS OF BIOTECHNOLOGY)			
PAPER - DSC 2-2			
Course Credits	No. of Hours per Week	Total No. of Teaching Hours	Total marks
2 Credits	2 Hours	30 Hours	50
Learning Objectives:			
<ol style="list-style-type: none"> 1. To study the structure and functions of major biomolecules. 2. To understand the properties of amino acids and proteins. 3. To study the structure, function and forms of DNA. 4. To study the pathway of glycolysis and Krebs's cycle. 			
Course Outcomes:			
After completion of the course, the students will be able to;			
<ol style="list-style-type: none"> 1. Understand the basic structure of standard amino acids. 2. Able to understand the structural levels of proteins. 3. Easily understand the basic properties of Fatty acids. 4. Able to know functions of Nucleic acids. 5. Understand the fatty acid breakdown pathway. 6. Able to understand the nucleic acid biosynthesis pathway 			
Unit I	Basic Biomolecules: A) Amino acids & Proteins: Structure and properties of Amino acids, Classification of proteins, Forces stabilizing protein structure. Different Level of structural organization of proteins. B) Carbohydrates: Structure and Function of Monosaccharide's, Oligosaccharides and Polysaccharides. C) Lipids: Structure, function, Classification, nomenclature and properties of Fatty acids, Triglycerides and Phospholipids. D) Nucleic acids: Structure and functions of Nucleic acids, Nucleosides & Nucleotides, Double helical Right-handed structure of DNA, forms of DNA E) Enzymes: Definition, Holoenzyme, Apoenzyme, Cofactors, coenzyme, prosthetic groups, Mechanism of enzyme action (Lock & Key, Induced fit hypothesis) and active site		15
Unit II	Metabolism: A) Carbohydrates metabolism: Glycolysis, fate of Pyruvate (alcoholic and lactic acid fermentation) TCA cycle & glycogen synthesis. B) Lipid metabolism: β -oxidation of saturated and unsaturated fatty acids. C) Nucleic Acid Metabolism: De novo, Salvage pathways.		15

Reference Books:

1. Berg, J. M., Tymoczko, J. L. and Stryer, L. (2006). Biochemistry. VI Edition. W.H Freeman and Co.
 2. Buchanan, B., Gruissem, W. and Jones, R. (2000) Biochemistry and Molecular Biology of Plants. American Society of Plant Biologists.
 3. Nelson, D.L., Cox, M.M. (2004) Lehninger Principles of Biochemistry, 4th Edition, WH Freeman and Company, New York, USA.
 4. Hopkins, W.G. and Huner, P.A. (2008) Introduction to Plant Physiology. John Wiley and Sons.
 5. Voet & Voet, 2000 Biochemistry, John Wiley, New York.
- Zubay, 1995, Biochemistry, Brown Publishers.

PRACTICALS(MAJOR)
PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP) SEM-II
PRACTICALS RELATED TO DSC 2-2 P
ENTREPRENEURSHIP PRACTICAL – V (BIOTECHNOLOGY)

Course Credits	No. of Hours per Week/Batch	Total No. of Teaching Hours	Total marks
2 Credits	4 Hours	--	50(30+20)
Sr.No.	Practical/Assignment/Exercise/Activity (Any 10)		
1	Isolation of bacteria using Streak plate technique		
2	Isolation of bacteria using Spread plate technique		
3	Microscopic examination of micro-organisms-Simple, Gram's staining, Motility,		
4	Lactophenol cotton blue staining (Fungi)		
5.	Biochemical Characterization of Bacteria		
6	Qualitative tests for Carbohydrates		
7	Separation of amino acids by Paper Chromatography		
8	Estimation of Protein by Lowry's method		
9	Estimation of blood glucose by folin-Wu method		
10	Estimation of DNA by DPA method		
11	Estimation of acid value of lipids		
12	Estimation of RNA by Orcinol method		
13	Determination of Haemoglobin		
14	Qualitative analysis of carbohydrates		
15	Qualitative analysis of amino acids		
16	Qualitative analysis of lipids		
17	Determination of titration curve of amino acids		
18	Determination of titration curve of amino acids		
19	Estimation of protein by biuret method		
20	Estimation of blood urea level by DAM method		
21	Estimation of DNA by spectroscopy method		

PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP), SEM-I
COURSE NAME: ENTREPRENEURSHIP – VI (MACROECONOMICS)
PAPER - DSC 3-2

Course Credits	No. of Hours per Week	Total No. of Teaching Hours	Total marks
2 Credits	2 Hours	30 Hours	50
Learning Objectives –			
<ol style="list-style-type: none"> 1. Students will become familiar with measures of economic performance, learn to use these indicators to evaluate current economic conditions, and understand how markets function in a capitalistic society. 2. Students will learn the major perspectives on what determines performance of the overall economy and will learn to analyze impacts on the economy. 3. Students will learn the key approaches to macroeconomic policy. They will develop skills to analyze impacts of policy actions and to evaluate the advantages and disadvantages of different policies. 			
Course Outcomes (Cos)			
CO1: Effectively express general economic concepts and the ability to think critically in written/oral form.			
CO2: Locate and use information related to economics.			
CO3: Demonstrate ability to integrate knowledge and ideas in a coherent and meaningful manner.			
Unit I	Introduction to Macro Economics		15
	<ul style="list-style-type: none"> ● Introduction to macroeconomics, Basic economics concepts ● Opportunity cost and the Production Possibilities Curve ● Comparative advantage and the gains from trade ● Demand Supply market Management: Meaning, Concept, Importance and Functions 		
Unit II	Economic Indicators and the Business Cycle		15
	<ul style="list-style-type: none"> ● Introduction to macroeconomics, Basic economics concepts, ● Gross Domestic Product, Limitations of GDP ● Real Vs. Nominal GDP ● Unemployment, Inflation ● Cost of Inflation ● Business Cycle 		

Reference Books:

1. James H. Donnelly, (1990) Fundamentals of Management, Pearson Education, 7th Edition.
2. Koontz and Heinz Wehrich (2017), Essentials of Management: An International and Leadership Perspective, McGraw Hill Education, 10th Edition.
3. Mitra J.K. (2018). Principles of Management. Oxford University Press

4. Dr. Mangesh P. Waghmare (2019) Principles of Management, NirhaliPrakashan Pune.
5. Rajkumar. S and Nagarajan. G (2021) Management Principles and Applications, Jayvee International Publications, Bangalore.
6. Drucker, P. F. (1999). Management Challenges for the 21st Century. Harper Collins Publishers Inc Harold.
7. J.S. Chandan (2002) Management Concepts and Strategies Vikas Publishing House, Pvt. Ltd New Delhi.

PRACTICALS PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP) PRACTICALSA RELATED TO - DSC 3-2 P ENTREPRENEURSHIP PRACTICAL – VI (MACROECONOMICS)			
Course Credits	No. of Hours per Week/Batch	Total No. of Teaching Hours	Total marks
2 Credits	4 Hours	--	50(30+20)
1	To make project on demand supply pattern of agriculture market of Solapur		
2	To study business cycle of any textile product of local industry.		
3	To make survey on causes and effects of unemployment in Solapur.		
4	To study the consumers behavior of textiles industry in Solapur		
5	Attend local trade exhibition and study the consumer behaviour.		
6	Interview of any local entrepreneur regarding unemployment and its effects.		
7	To make mini project on any relevant topic of the subject		

OPEN ELECTIVE			
PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP), SEM-II			
COURSE NAME –SALES MANAGEMENT			
PAPER – GE1 /OE1			
Course Credits	No. of Hours per Week	Total No. of Teaching Hours	Total marks
2 Credits	2 Hours	30 Hours	50
Learning Objectives –			
1. The objective of this paper is to provide students’ knowledge on sales and distribution strategies and their implications in managerial decision making.			
2. To explain the concepts of sales management, personnel selling and sales task summarize history of sale stages.			
3. Students can learn to develop a plan for organizing, staffing and training a sales force. Identify the key factors in establishing and maintaining high morale in the sales force.			
Course Outcomes (Cos)			
CO1: Recognize and demonstrate the significant responsibilities of sales person as key individual			
CO2: Understand the basic concepts and techniques of selling and their applications to managerial decision makings in the field			
CO3: Describe and formulate strategies to effectively manage company’s sales operations			
CO4: Evaluate the role of Sales manager and his/ her responsibilities in recruiting, motivating, managing and leading sales team			
Unit I	Sales Management		15
	<ul style="list-style-type: none"> ● Definition, objectives of Sales Management ● Evolution of Sales Management ● Sales organization ● Sales Budget ● Sales Promotion 		
Unit II	Personal Selling		15
	<ul style="list-style-type: none"> ● Definition, objectives of Sales Management ● Introduction, Salesmanship Skills ● Personal Selling skills& techniques –Sales Call – types of calls-AIDA, ● Types of salesmanship ● Sales force Management – Recruitment, motivation & controlling 		

Reference Books:

1. Still, R. R., Cudiff, E. W., Govoni. N. A. P. and Puri, S. Sales and Distribution Management, 6th edition, 2017, Pearson India Education Services.
2. Havaldar, K. K. and Cavale V. M., Sales and Distribution Management: Text and Cases, 3rd Edition, 2017, McGraw Hill Education (India) Private Limited.
3. Sales and Distribution Management- Dr. Matin Khan, Excel Books- First Edition

SEC-2			
PROGRAMME NAME: B.Sc.- I (ENTREPRENEURSHIP), SEM-II			
COURSE NAME – ENTREPRENEURIAL BEST PRACTICES			
Course Credits	No. of Hours per Week	Total No. of Teaching Hours	Total marks
2 Credits	2 Hours	30 Hours	50

Learning Objectives –

1. To provide conceptual exposure on converting idea to a successful entrepreneurial firm.
2. To identify significant changes and trends which create business opportunities and to analyze the environment for potential business opportunities.
3. To enable the students to understand the concept of Entrepreneurship and to learn the professional behavior expected of an entrepreneur.

Course Outcomes (COs)

CO1: The students will be familiar with knowledge about business and project reports for starting a new venture on team based.

CO2: Students can be well equipped with the appropriate tools for analyzing the business risks and hurdles

CO3: Develop a solution through critical thinking to optimize sustainable goal

Unit I	Entrepreneurial Skills Sets	15
	<ul style="list-style-type: none"> ● Developing Mission, Vision and Goals ● Building a Motivated Team ● Entrepreneurial Psychology, Driving Forces and Characteristics ● New Age Marketing and After Sales Services ● Trends in Entrepreneurship <ul style="list-style-type: none"> ● Business Ethics and Best Practices 	
Unit II	Opportunities And Challenges for Entrepreneurship	15
	<ul style="list-style-type: none"> ● Identifying and Meeting the Gaps in Resources at Optimized Cost ● Building a Sustainable Revenue Model and Periodical Business Plan ● Start-up Models ● Funding Options for Start-up, including Crowd Funding ● Predicting, Calculating and Overcoming Financial Risks <ul style="list-style-type: none"> ● Entrepreneurship And Technology 	

References:

1. Entrepreneurial Skills - Nieuwenhuizen
2. Entrepreneurial ecosystem in India:
3. Taking stock and looking ahead – S.K Jha
4. Funding for start-ups in India: what shakes it? – S Ghosh
5. Lean start-up: Making the start-up more successful – Rasmussen, Tanev
6. Risk management and financing among start-ups – Pukala
7. Startup leadership: how savvy entrepreneurs turn their ideas into successful enterprises – D Lidow

AEC	L1-2	English	2
VEC 2	VEC 2	Environmental Studies	2
CC 2	CC 2	Community Engagement & Services	2

Reference Books:

1. General Chemistry- C. N. R. Rao
2. Organic Chemistry - Pine
3. Essentials of Physical Chemistry- Puri, Sharma and Pathania
4. Inorganic Chemistry- Puri, Sharma and Pathania

5. Essentials of Physical Chemistry- Bahl and Tuli
6. Advanced Physical Chemistry- Gurudeep Raj
7. General Science- Bhaske, Bhaske Publication
8. Science- All in One- Dr. Monali Salunkhe, DeepstambhPrakashan

UA

पुण्यश्लोकअहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर
Punyashlok Ahilyadevi Holkar Solapur University, Solapur.
Faculty of Science & Technology.
Nature of Question Paper for CBCS Pattern
B. Sc. / B.C.A (Part- I) w.e.f. AY 2024-25

Time:

Total Marks: 30

Instructions

- 1) All Questions are compulsory
- 2) Figure to right indicate full marks.

Q.1 Choose correct alternative. (MCQ)

06 Marks

Q.2. Answer the following. (Any three)

6 (2+2+2)

- A)
- B)
- C)
- D)
- E)

Q.3. Answer the following (Any two).

6 (3+3)

- A)
- B)
- C)

Q.4. Answer the following (Any two).

6 (3+3)

- A)
- B)
- C)

Q.5. Answer the following (Any one).

6 Marks

- A)
- B)

CA

पुण्यश्लोकअहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर
Punyashlok Ahilyadevi Holkar Solapur University, Solapur.
Faculty of Science & Technology.
Nature of Question Paper for CBCS Pattern
B. Sc. / B.C.A. (Part- I) w.e.f. AY 2024-25

Time:

Total Marks: 20

Internal Evaluation System for 20 Marks
Choose any two of the following
Home Assignment / Unit Test / Tutorial / Seminar

Pattern of Examination

External Evaluation UA + Internal Evaluation CA
30 Marks + 20 Marks = 50 Marks

Passing Criteria –

1. Written Exam – 12 out of 30
2. Continuous Assessment (CA) – 08 out of 20