



THE COURSE STRUCTURE OF UNDER GRADUATE

BATULOR OF SCIENCE

w.e.f.

Academic Year 2020-21 and Onwards Under

CHOICE BASED CREDIT SYSTEM (CBCS)

1. KANNADA

	Course		Teaching	Credit	Marl	KS .	Tota	Duratio
Sem	Code	Title of the Paper	Hours/We ek	S	Sem End Exam	IA	l	n of Exam
Ι	AECC KAN	Kannada Language I	4	2	80	20	100	3 Hrs
II	AECC KAN	Kannada Language II	4	2	80	20	100	3 Hrs
III	AECC KAN	Kannada Language III	4	2	80	20	100	3 Hrs
IV	AECC KAN	Kannada Language IV	4	2	80	20	100	3 Hrs

2. ENGLISH

	_		Teaching		Mark	S		Duratio
Sem	Course Code	Title of the Paper	Hours/Wee k	Credit s	Sem End Exam	IA	Tota 1	n of Exam
Ι	AECC ENG117	English Gems I	4	2	80	20	100	3 Hrs
II	AECC ENG118	English Gems II	4	2	80	20	100	3 Hrs
III	AECC ENG119	English Language Skills I	4	2	80	20	100	3 Hrs
IV	AECC ENG120	English Language Skills II	4	2	80	20	100	3 Hrs

3. HINDI

Sem	Course	Title of the Paper	Paper	Teaching Hours per week	Duration of Exam (Hrs)	IA	Mark Exam		Credits
I	AECC	1) गद्य फुलवारी (गद्य संकलन) 2) हिंदी भाषा के विविध रुप 3) स्वर तथा व्यंजन 4) अनुवाद (पारिभाषिक शब्दावली)	1T*	4	3	20	80	100	3
п	AECC	1) काव्य कुसुम (कविता संकलन) 2) व्याकरण 3) पत्रलेखन	1T*	4	3	20	80	100	3
III	AECC	1) कथा भारती (कहानी संकलन) 2) भाषा संप्रेषण 3) मुहावरे और लोकोक्तियाँ 4) पर्यायवाची शब्द, विलोम शब्द, अनेक शब्दों के लिए एक शब्द	1T*	4	3	20	80	100	3
	SEC	1) संभाषण कला 2) प्रयोजनमूलक हिंदी	1T*	2	2	10	40	50	2
IV	AECC	1) गिलिगडु (उपन्यास) 2) पल्लवन तथा संक्षेपण 3) अनुवाद	1T*	4	3	20	80	100	3
	SEC	चलचित्र लेखन	1T*	2	2	10	40	50	2

4. MARATHI

Sem	Course	Title of the Paper	Paper	Teaching Hours per	Duration of Exam (Hrs)		Marks		Credits
				week		IA	Exam	Total	
I	AECC	विनोदी वाङ्मय	1 T	4	3	20	80	100	3
		· · · ·							
П	AECC	वाङ्मयप्रकार:नाटक	1 T	4	3	20	80	100	3
	AECC	कादंबरी	1 T	4	3	20	80	100	3
III	SEC	जाहिरात लेखन	1 T	2	2	10	40	50	2
	AECC	वाङ्मयप्रकार:चरित्र	1 T	4	3	20	80	100	3
IV	SEC	श्राव्य माध्यमांसाठी लेखन कौशल्य	1 T	2	2	10	40	50	2

5. ARABIC

Sem	Course	Title of the Paper	Paper	Teaching Hours	Duratio n of		Mark	S	Credits
				per	Exam	IA	Exam	Total	
				week	(Hrs)				
I	AECC	Prose, Poetry, History of Arabic literature and Grammar.	1 T	4	3	20	80	100	3
II	AECC	Prose, Poetry, History of Arabic literature and Grammar.	1 T	4	3	20	80	100	3
	AECC	Prose, Poetry, History of Arabic literature and Grammar.	1 T	4	3	20	80	100	3
	SEC	Arabic Calligraphy	1 T	2	2	10	40	50	2
IV	AECC	Prose, Poetry, History of Arabic literature and Grammar.	1 T	4	3	20	80	100	3
	SEC	Arabic Phonetics	1 T	2	2	10	40	50	2

6. URDU

I	AECC	Study of Prose and poetry	1 T*	4 Hrs	3	20	80	100	3
II	AECC	Study of Prose and poetry	1 T*	4 Hrs	3	20	80	100	3
- 111	AECC	Study of Prose and poetry	1 T*	4 Hrs	3	20	80	100	3
	SEC	This SEC paper as per B A IIISem Syllabi	1 T	2 Hrs	2	10	40	50	2
IV	AECC	Study of Prose and poetry	1 T*	4 Hrs	3	20	80	100	3
	SEC	This SEC paper as per B A IV semSyllabi	1 T	2 Hrs	2	10	40	50	2

7. SANSKRIT

	~		Teaching	~	Mark	S		Duratio
Sem	Course Code	Title of the Paper	Hours/Wee k	Credit s	Sem End Exam	IA	Tota l	n of Exam
Ι	AECC SAN	Sanskrit Language I	4	2	80	20	100	3 Hrs
II	AECC SAN	Sanskrit Language II	4	2	80	20	100	3 Hrs
III	AECC SAN	Sanskrit Language III	4	2	80	20	100	3 Hrs
IV	AECC SAN	Sanskrit Language IV	4	2	80	20	100	3 Hrs

Part 3: SEC - Skill Enhancement Course for all courses (Open Elective Course)

	_		Teaching		Mark	S		Duratio
Sem	Course Code	Title of the Paper	Hours/Wee k	Credit s	Sem End Exam	IA	Tota 1	n of Exam
III	SEC SAN	TRANSLATION	2	2	40	10	50	2 Hrs
IV	SEC SAN	PATHANAM	2	2	40	10	50	2 Hrs
v	SEC SAN	BHAASHAA KAUSHALAM	2	2	40	10	50	2 Hrs
VI	SEC SAN	PATRA LEKHANAM	2	2	40	10	50	2 Hrs

8. PHYSICS

			Sc., PHYSICS Syllabus as pe t from the academic year 2			ards)		
<i>c</i>	D .	Paper		Hours/		Marks		Subject
Sem	Part	Code	Title of the Paper	Week	IA	Exam	Total	Credits
	Part – 1	PHYDSCT1. 1	Mechanics and Theory of Relativity	4	20	80	100	3
1	DSC	PHYDSCP1. 1	Practical I	3	10	40	50	1
		Tota	al : Hours / Credits	7			150	4
	Part – 1	PHYDSCT2. 1	Electricity & Magnetism	4	20	80	100	3
11	DSC	PHYDSC P2.1	Practical II	3	10	40	50	1
		Tota	al : Hours / Credits	7			150	4

		(With eff	B.Sc., PHYSICS Syllabus as per fect from the academic year 20		nward	s)		
Sem	Part	Paper	Title of the Paper	Hours/		Subject		
Jenn	rait	Code		Week	IA	Exam	Total	Credits
	Part – 1	PHYDSCT3.1	Thermodynamics-I, Sound and Waves	4	20	80	100	3
u	DSC	PHYDSCP3.1	Practical III	3	10	40	50	1
	Part – 2 SEC	PHYSECT3.2	Weather Forecasting	2	10	40	50	2
		То	tal : Hours / Credits	9			200	6
	I						r	
	Part – 1	PHYDSCT4.1	Thermodynamics-II, Statistical Mechanics and Optics	4	20	80	100	3
IV	DSC	PHYDSCP4.1	Practical IV	3	10	40	50	1
	Part – 2 SEC	PHYSECT4.2	Renewable Energy sources and Energy Harvesting	2	10	40	50	2
		То	tal : Hours / Credits	9			200	6

		Paper		Hours/		Subject		
Sem	Part	Code	Title of Paper	Week	IA	Exam	Total	Credits
		PHYDSET5.1	Mathematical Physics – I, Nuclear and Particle Physics and Classical Mechanics	4	20	80	100	3
		PHYDSEP5.1	Practical V	3	10	40	50	1
	Part – 1		Quantum Mechanics – I, Electronics and Optoelectronics	4	20	80	100	3
ν	DSE	PHYDSEP5.2A (Elective I)	Practical VIA	3	10	40	50	1
		(Elective II)	Modern Physics - I	4	20	80	100	3
		PHYDSEP5.2B (Elective II)	Practical VIB	3	10	40	50	1
	Part – 2 SEC	PHYSECT5.3	Basic Instrumentation Skills	2	10	40	50	2
		Тс	tal : Hours / Credits	16			350	10
Note:	Students h	ave to choose e	ither Elective-I or Elective-II	L L				
		PHYDSET6.1	Mathematical Physics – II, Atomic, Molecular and Optical Physics and Atmospheric Physics.	4	20	80	100	3
		PHYDSEP6.1	Practical VII	3	10	40	50	1
	Part – 1 DSE	PHYDSET6.2A (Elective III)	Quantum Mechanics – II, Condensed Matter Physics and Nanomaterials	4	20	80	100	3
VI		PHYDSEP6.2A (Elective III)	Practical VIIIA	3	10	40	50	1
		(Elective I V)	Modern Physics - II	4	20	80	100	3
		PHYDSEP6.2B (Elective IV)	Practical VIIIB	3	10	40	50	1
	Part – 2 SEC	DUVCECTA 2	Electrical Circuits And Network Skills	2	10	40	50	2
		Total : Hours / Credits					350	10

T: Theory, P: Practical, CC/EA: Co-curricular/Extension Activities. AECC: Ability Enhancement Compulsory Course, DSC: Discipline Specific Course. DSE: Discipline Specific Elective, SEC: Skill Enhancement Course)

Note: Duration of examinations is 03 Hrs for 80 Marks theory and 02 hrs for 40 marks theory. For

practical's duration of examination is 03 Hrs.

9. CHEMISTRY

		(With ef	fect from the academic year 2	2020-21 o	nward	s)		
<u> </u>	.	Paper	Title of the Dener	Hours/	Hours/ Marks			Subject
Sem	Part	Code	Title of the Paper	Week	IA	Exam	Total	Credits
		CHEDSCT 1.1	Chemistry-1	4	20	80	100	3
1	DSC	CHEDSCP 1.1	Practicals-1	3	10	40	50	1
		То	7			150	4	
		CHEDSCT 2.1						
	Part – 1	CHEDSCI 2.1	Chemistry-2	4	20	80	100	3
11	DSC	CHEDSCP 2.1	Practicals-2	3	10	40	50	1
		Total: Hours / Credits					150	4

		(With effe	ect from the academic year 202	1-22 on	wards)		
Sem	Part	Paper	Title of the Paper	Hours/		Marks		Subject
Jeili	raii	Code	The of the Paper	Week	IA	Exam	Total	Credits
	Part – 1	CHEDSCT3.1	Chemistry-3	4	20	80	100	3
111	DSC CHEDSCP3.1 Practicals-3		3	10	40	50	1	
	Part – 2 SEC	CHESECT3.2	Chemistry of Cosmetics & Perfumes	2	10	40	50	2
		Тс	Total: Hours / Credits				200	6
							100	2
	Part – 1	CHEDSCT4.1	Chemistry-4	4	20	80	100	3
IV	DSC	CHEDSCP4.1	Practicals-4	3	10	40	50	1
	Part – 2 SEC	CHESECT4.2	Fuel Chemistry	2	10	40	50	2
		Тс	otal: Hours / Credits	9			200	6

		Daman				Marks		Cubic
Sem	Part	Paper Code	Title of Paper	Hours/ Week	IA	Exam	Total	Subjeo Credit
		CHEDSET 5.1	Chemistry-5	4	20	80	100	3
		CHEDSEP 5.1	Practicals-5	3	10	40	50	1
	Part – 1	CHEDSET 5.2A (Elective I)	Chemistry-5A	4	20	80	100	3
	DSE	CHEDSEP 5.2A (Elective I)	Practicals-5A	3	10	40	50	1
ν		CHEDSET 5.2B (Elective II)	Chemistry-5B	4	20	80	100	3
		CHEDSEP 5.2B (Elective II)	Practicals-5B	3	10	10 40 50 1	1	
	Part – 2 SEC	CHESECT5.3	Basic Analytical Chemistry	3	10	40	50	2
		Tota	l: Hours / Credits	17			350	10
ote: Stu	udents have	to choose either	Elective-I or Elective-II					
		CHEDSET 6.1	Chemistry-6	4	2	0 8	0 10	00 3
		CHEDSEP 6.1	Practicals-6	3	1	0 4	0 5	0 1
	Part – 1	m `	Chemistry-6A	4	2	0 8	0 10	00 3
	DSE	CHEDSEP 6.2A (Elective III)	Practicals-6A	3	1	0 4	0 5	0 1
VI		CHEDSET 6.2B (Elective IV)	Chemistry-6B	4	2	0 8	0 10	00 3
		CHEDSEP 6.2B (Elective IV)	Practicals-6B	3	1	0 4	0 5	0 1
	Part – 2 SEC	CHESECT 6.3	Pharmaceutical Chemistry	3	1	0 4	0 5	0 2
		To	17	,		35	50 10	

T: Theory, P: Practical, CC/EA: Co-curricular/Extension Activities. AECC: Ability Enhancement Compulsory Course, DSC: Discipline Specific Course. DSE: Discipline Specific Elective, SEC: Skill Enhancement Course). Note: Duration of examinations is 03 h for 80 Marks theory and 02 h for 40 marks theory. For practicals, duration of examination is 03 h.

10. ELECTRONICS

	B.Sc., ELECTRONICS Syllabus under CBCS scheme (With effect from the academic year 2020-21 onwards)										
(Dawt	Paper	Tiula of the Demon	Hours/	Marks		Subject				
Sem	Part	Code	Title of the Paper	Week	IA	Exam	Total	Credits			
	Part – 1		Network Analysis And Analog Electronics	4	20	80	100	3			
1	DSC	ELEDSC P1.1	Practical I	3	10	40	50	1			
		Tot	7			150	4				
	Part – 1		Electronic Circuits And Special Purpose Devices	4	20	80	100	3			
II	DSC	ELEDSC P2.1	Practical II	3	10	40	50	1			
		Total : Hours / Credits		7			150	4			

			ELECTRONICS Syllabus under (ect from the academic year 202)		
Sem	Part	Paper	Title of the Paper	Hours/		Marks		Subject
Sem	Part	Code	Title of the Paper	Week	IA	Exam	Total	Credits
	Part – 1		Linear Integrated Circuits And 'C' Programming	4	20	80	100	3
u	DSC	3	10	40	50	1		
	Part – 2 SEC	ELESECT3.2	Weather Forecasting	2	10	40	50	2
		Тс	otal : Hours / Credits	9			200	6
				1		1		
	Part – 1	ELEDSCT4.1	Digital Electronics	4	20	80	100	3
IV	DSC	ELEDSCP4.1	Practical IV	3	10	40	50	1
	Part – 2 SEC	ELESECT4.2	Renewable Energy sources and Energy Harvesting	2	10	40	50	2
		Тс	otal : Hours / Credits	9			200	6

	B.Sc., ELECTRONICS Syllabus under CBCS scheme (With effect from the academic year 2022-23 onwards)										
		Paper		Hours/		Marks		Subject			
Sem	Part	Code	Title of Paper	Week	IA	Exam	Total	Credits			
		ELEDSET5.1	Communication-I	4	20	80	100	3			
		ELEDSEP5.1	Practical V	3	10	40	50	1			
			Microprocessor -8085, Signals And Systems	4	20	10 40 50 1					
		ELEDSEP5.2A (Elective I)	Practical VIA			1					
ν		ELEDSET5.2B (Elective II)	Microprocessor -8085 & 8086	4	20	80	100	3			
		ELEDSEP5.2B (Elective II)	Practical VIB	3	10	40	50	1			
	Part – 2 SEC	ELESECT5.3	Basic Instrumentation Skills	2	10	40	50	2			
		Tota	al : Hours / Credits	16			350	10			
Note: 9	Students ha	ave to choose e	ither Elective-I or Elective-II								
		ELEDSET6.1	Communication-II	4	2	0 8	0 10	0 3			
		ELEDSEP6.1	Practical VII	3	1	0 4	0 5	0 1			
		ELEDSET6.2A (Elective III)	Microcontroller -8051 &Embedded System	4	2	0 8	0 10	00 3			
	Part – 1 DSE	ELEDSEP6.2A (Elective III)	Practical VIIIA	3	1	0 4	0 5	0 1			
VI		ELEDSET6.2B (Elective IV)	Microcontroller&MATLAB	4	2	0 8	0 10	0 3			
		ELEDSEP6.2B (Elective IV)	Practical VIIIB	3	1	0 4	0 5	0 1			
	Part – 2 SEC	FI ESECT6 3	Electrical Circuits And Network Skills	2	1	0 4	0 5	0 2			
		Тс	otal : Hours / Credits	16	5		35	50 10			
Note: 9	Students ha	ave to choose e	ither Elective-III or Elective-IV	I	1	I	ı	I			

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11. GEOGRAPHY

Sem.	Title of the Paper	Paper	Teachin	Durati	Eva	Credi					
		Code	g Hours / Week	on of Exam	IA	Sem. End Exa m	Total	ts			
I	<u>Theory – 1.1</u> Physical Geography- Part A	DSC1.1	5	3	20	80	100	3			
	<u>Practical – 1.2</u> Introduction to cartography	DSC- 1.2	3	3	10	40	50	1			
II	<u>Theory – 2.1</u> Physical Geography- Part B	DSC- 2.1	5	3	20	80	100	3			
	<u>Practical – 2.2</u> Representation of Relief	DSC- 2.2	3	3	10	40	50	1			
111	<u>Theory – 3.1</u> Human Geography	DSC- 3.1	5	3	20	80	100	3			
	<u>Practical – 3.2</u> Map Projections	DSC- 3.2	3	3	10	40	50	1			
	Skill Enhanced Course (Compulsory Paper)										
	<u>Theory – 3.3 (</u> Compulsory Paper) Basics of Physical Geography	SEC- I - 3.3	2	2	10	40	50	2			
IV	<u>Theory – 4.1</u> Regional Geography of Karnataka	DSC- 4.1	5	3	20	80	100	3			
	<u>Practical – 4.2</u> Basics Statistics	DSC- 4.2	3	3	10	40	50	1			
	Skill Enhanced Course (Compulsory Paper)										
	<u>Theory – 4.3</u> (Compulsory Paper) Geography of Karnataka	SEC- II 4.3	2	2	10	40	50	2			
V	<u>Theory – 5.1 [</u> Compulsory] Environmental Geography	DSE- 5.1	4	3	20	80	100	3			
	(Choice any one from 5.2-a or 5.3- b) <u>Theory – 5.2-a</u>	DSE- 5.2	4	3	20	80	100	3			
	Development of Modern Geography <u>Theory – 5.2-b</u> Population Geography	DSE- 5.3	4	3	20	80	100	3			
	Practical 1 st - 5.3 Interpretation of SOI Topographical Maps	DSE- 5.4	3	3	10	40	50	1			
	<u>Practical 2nd – 5.4</u> Representation of Geographical	DSE- 5.5	3	3	10	40	50	1			
		kill Enhance	ed Course (Co	mnulsory P	anor)			1			

	Theory – 5.5		2	2	10	40	50	2
	Population Geography (Compulsory Paper)	SEC- III – 5.6	-		10		50	-
VI	<u>Theory – 6.1</u> [Compulsory] Regional Geography of India	DSE- 6.1	4	3	20	80	100	3
	(Choice any one from 6.2-a or 6.2-b) <u>Theory – 6.2-a</u> Settlement Geography	DSE- 6.2- a	4	3	20	80	100	3
	<u>Theory – 6.2-b</u> Regional Planning and Development	DSE- 6.2- b	4	3	20	80	100	3
	<u>Practical 1st – 6.3</u> Interpretation of IMD Weather Reports	DSE- 6.3	3	3	10	40	50	1
	<u>Practical 2nd – 6.4</u> Field Based Project work/Report	DSE- 6.4	3	3	10	40	50	1
	S	kill Enhance	ed Course (C	ompulsory P	aper)			
	<u>Theory – 6.5</u> Geography of India (Compulsory Paper)	SEC- IV – 6.5	2	2	10	40	50	2

Note:

DSC: Discipline Specific Course Papers [All DSC Papers are Compulsory for I sem to IV sem]

DSE : Discipline Specific Elective Papers [Students can select any one elective papers from DSE -5.2-a or 5.2-b for V semester and DSE – 6.2-a or 6.2-b for VI semester.

12. MICROBIOLOGY

E.

		(Wit	h effect from the academic year	2020-21 от	nwards	;)		
Sam	Dout	Paper	Title of the Domon	Hours/	Marks		Subject	
Sem	Part	Code	Title of the Paper	Week	IA	Exam	Total	Credits
	Part – 1	MCBDSCT1.1	General Microbiology	4	20	80	100	3
Ι	DSC	MCBDSCP1.1	Practicals-1	3	10	40	50	1
		Tot	7			150	4	
		MCBDSCT2.1						
	Part – 1	Meddeberiz.i	Microbiological Techniques	4	20	80	100	3
п	DSC	MCBDSCP2.1	Practicals-2	3	10	40	50	1
		Tot	tal: Hours / Credits	7			150	4

		(Wi	th effect from the academic year 2021-	-22 onwai	rds)			
Sem	Part	Paper	T:41a of the Domor	Hours/		Marks		Subject
Sem	Part	Code	Title of thePaper	Week	IA	Exam	Total	Credits
	Part – 1	MCBDSCT3.1	Microbial Physiology and Genetics	4	20	80	100	3
ш	DSC	MCBDSCP3.1	Practicals-3	3	10	40	50	1
	Part – 2 SEC	MCBSECT3.2	Microbial quality control in Food and Pharmaceutical Industries	2	10	40	50	2
		,	Total: Hours / Credits	9			200	6
				1			[
	Part – 1	MCBDSCT4.1	Molecular biology and Genetic Engineering	4	20	80	100	3
IV	DSC	MCBDSCP4.1	Practicals-4	3	10	40	50	1
	Part – 2 SEC	MCBSECT4.2	Microbial Diagnostic in health clinics	2	10	40	50	2
		,	Total: Hours / Credits	9			200	6

		(Wi	th effect from the academic year 202	2-23 onwa	ards)			
Sem	Part	Paper	Title of Paper	Hours/	TA	Marks	T . 4 . 1	Subject
Sem	1	Code		Week	IA	Exam	Total	Credits
		MCMDSET5.1	Environmental Microbiology	4	20	80	100	3
		MCBDSEP5.1	Practical-5	3	10	40	50	1
		MCBDSET5.2A (Elective I)	Soil and agricultural microbiology	4	20	80	Total Credits	3
	Part – 1 DSE	MCBDSEP5.2A (Elective I)	Practicals-5A	3	10	40	50	1
v		MCBDSET5.2B (Elective II)	Microbes in Sustainable agriculture and development	4	20	80	100	3
		MCBDSEP5.2B (Elective II)	Practicals-5B	3	10	40	50	1
	Part – 2 SEC	MCBSECT5.3	Biofertilizers and Biopesticides	3	10	40	50	2
		, ,	Fotal: Hours / Credits	17			350	10
Note: S	Students h	ave to choose eith	er Elective-I or Elective-II			I	1	1
		MCBDSET6.1	Food and industrial Microbiology	4	2	0 8	0 10	00 3
		MCBDSEP6.1	Practicals-6	3	1	0 4	0 5	0 1
		MCBDSET6.2	A Immunology and Medicinal					
		(Elective III)	Microbiology	4	2	0 8	0 10	00 3
	Part – DSE	1 MCBDSEP6.2 (Elective III)	A Practicals-6A	3	1	0 4	0 5	0 1
VI		MCBDSET6.2 (Elective IV)	B Instrumentation and Biotechniques (Theory)	4	2	0 8	0 10	00 3
		MCBDSEP6.2 (Elective IV)	B Practicals-6B	3	1	0 4	0 5	0 1
	Part – SEC	2 MCBSECT6.3	Management of Human Microbial diseases	3	1	0 4	0 5	0 2
			Total: Hours / Credits	17	,		35	50 10
Note: S	Students h	ave to choose eith	ner Elective-III or Elective-IV	I	I	I	1	I

T: Theory, P: Practical, CC/EA: Co-curricular/Extension Activities. AECC: Ability Enhancement Compulsory Course, DSC: Discipline Specific Course. DSE: Discipline Specific Elective, SEC: Skill Enhancement Course).

Note: Duration of examinations is 03 h for 80 Marks theory and 02 h for 40 marks theory. For practicals, duration of examination is 03 h.

13. BIOTECHNOLOGY

	(With effect from the academic year 2020-21 onwards)										
6	David	Paper	The state Design	Hours/	Marks			Subject			
Sem	Part	Code	Title of the Paper	Week	IA	Exam	Total	Credits			
	Part – 1	BTNDSCT 1.1	Cell Biology and Genetics	4	20	80	100	3			
1	DSC	BTNDSCP 1.1	Practicals-1	3	10	40	50	1			
		Т	otal: Hours / Credits	7			150	4			
	Part – 1	BTNDSCT 2.1	Biochemistry and Biogenetics	4	20	80	100	3			
11	DSC	BTNDSCP 2.1	Practicals-2	3	10	40	50	1			
		Т	7			150	4				

		(With effe	ect from the academic year 20	21-22 or	nwards)		
Sem	Part	Paper	Title of the Deper	Hours/		Marks		Subject
Jeili	Fall	Code	Title of the Paper	Week	IA	Exam	Total	Credits
	Part – 1	BTNDSCT3.1	Microbiology and Immunology	4	20	80	100	3
111	DSC	BTNDSCP3.1	Practicals-3	3	10	40	50	1
	Part – 2 SEC	BTNSECT3.2	Molecular Diagnostics	2	10	40	50	2
		Тс	otal: Hours / Credits	9		40	200	6
		DTNDSCT4 1					100	2
	Part – 1	BTNDSCT4.1	Molecular Biology.	4	20	80	100	3
IV	DSC	BTNDSCP4.1	Practicals-4	3	10	40	50	1
	Part – 2 SEC	BTNSECT4.2	Industrial Fermentations	2	10	40	50	2
		Тс	otal: Hours / Credits	9			200	6

		Paper		Hours/		Marks		Subje	
Sem	Part	Code	Title of Paper	Week	IA	Exam	Total	Credi	
		BTNDSET 5.1	Plant and Animal cell Technology.	4	20	80	100	3	
		BTNDSEP 5.1	Practicals 5	3	10	40	50	1	
		BTNDSET 5.2A (Elective I)	Recombinant DNA Technology and Nanotechnology	4	20	80	100	3	
	Part – 1 DSE	BTNDSEP 5.2A (Elective I)	Practicals-5A	3	10	40	50	1	
ν		BTNDSET 5.2B (Elective II)	Bioinformatics.	4	20	80		3	
		BTNDSEP 5.2B (Elective II)	Practicals-5B	3	10	40	50	1	
	Part – 2 SEC	BTNSECT5.3	Industrial Fermentations	3	10	40	50	2	
		Tota	l: Hours / Credits	17	17 35		350	10	
Note:	Students h	ave to choose eit	ther Elective-I or Elective-II					<u> </u>	
		BTNDSET 6.1	Industrial and Environmental Biotechnology	4	2	0 8	0 10	00 3	
		BTNDSEP 6.1	Practicals-6	3	10	0 4	0 5	0 1	
	Part – 1	BTNDSET 6.2A (Elective III)	Agricultural and medical Biotechnology	4	2	0 8	0 10	00 3	
	DSE	BTNDSEP 6.2A (Elective III)	Practicals-6A	3	10	0 4	0 5	0 1	
VI		BTNDSET 6.2B (Elective IV)	Medical Microbiology	4	2	0 8	0 10	00 3	
		BTNDSEP 6.2B (Elective IV)	Practicals 6B	3	10	0 4	0 5	0 1	
	Part – 2 SEC	BTNSECT 6.3	Basics of Forensic Science	3	10	0 4	0 5	0 2	
		Tot	17			35	50 10		

T: Theory, P: Practical, CC/EA: Co-curricular/Extension Activities. AECC: Ability Enhancement Compulsory Course, DSC: Discipline Specific Course. DSE: Discipline Specific Elective, SEC: Skill Enhancement Course). Note: Duration of examinations is 03 h for 80 Marks theory and 02 h for 40 marks theory. For practicals, duration of examination is 03 h.

14. BOTANY

		· · · · · · · · · · · · · · · · · · ·	BOTANY Syllabus under C ect from the academic year 2					
G		Paper		Hours/		Mark	s	Subject
Sem	Part	Code	Title of the Paper	Week	IA	Exam	Total	Credits
	Part – 1	BOTDSCT1.1	Biodiversity (Microbes, Algae, Fungi and Archegoniate)	4	20	80	100	3
I	DSC	BOTDSCP1.1	Practical I	3	10	40	50	1
		Tota	7			150	4	
	Part – 1	BOTDSCT2.1	Plant Ecology and Diversity of angiosperms	4	20	80	100	3
П	DSC	BOTDSCP2.1	Practical II	3	10	40	50	1
		Tota	l : Hours / Credits	7			150	4

			c., BOTANY Syllabus under CB ffect from the academic year 202			s)		
Sem	Part	Paper	Title of the Paper	Hours/		Marks		Subject
Jem	1 ui t	Code	The of the Tuper	Week	IA	Exam	Total	Credits
	Part – 1	BOTDSCT3.1	Plant Anatomy and Embryology	4	20	80	100	3
	DSC	BOTDSCP3.1	Practical III	3	10	40	50	1
111	Part – 2 SEC	BOTSECT3.2	Herbal technology	2	10	40	50	2
		Total : Hours / Credits					200	6
	1					1		
	Part – 1	BOTDSCT4.1	Plant Physiology and Biochemistry	4	20	80	100	3
IV	DSC	BOTDSCP4.1	Practical IV	3	10	40	50	1
IV	Part – 2 SEC	BOTSECT4.2	Nursery and Gardening	2	10	40	50	2
		То	tal : Hours / Credits	9			200	6

6 a ma	Part	Paper	Title of Deper	Hours/		Marks		Subject
Sem	Part	Code	Title of Paper	Week	IA	Exam	Total	Credits
		BOTDSET5.1	Economic Botany and Biotechnology	4	20	80	100	3
		BOTDSEP5.1	Practical V	3	10	40	50	1
	Part – 1	BOTDSET5.2A (Elective I)	Cell and Molecular Biology	4	20	80	100	3
v	DSE	BOTDSEP5.2A (Elective I)	Practical VIA	3	10	40	50	1
v		BOTDSET5.2B (Elective II)	Genetics, Plant Breeding and Evolution	4	20	80	100	3
		BOTDSEP5.2B (Elective II)	Practical VIB	3	10	40	50	1
	Part – 2			2	10	40	50	2
	SEC	BOTSECT5.3	Medicinal Botany	2	10	40	50	2
		Tota	l : Hours / Credits	16			350	10
lote: S	Students h	ave to choose eitl	her Elective-I or Elective-II					
		BOTDSET6.1	Analytical Techniques in Plants.	4	20	80	100	3
		BOTDSEP6.1	Practical VII	3	10	40	50	1
	Part – 1	BOTDSET6.2A (Elective III)	Research Methodology	4	20	80	100	3
VI	DSE	BOTDSEP6.2A (Elective III)	Practical VIIIA	3	10	40	50	1
VI		BOTDSET6.2B (Elective IV)	Biofertilizers and Organic Farming	4	20	80	100	3
		BOTDSEP6.2B (Elective IV)	Practical VIIIB	3	10	40	50	1
	Part – 2	BOTSECT6.3	Ethnobotany	2	10	40	50	2
	SEC	Tota	al : Hours / Credits	16			350	10

15. MATHEMATICS

	B.Sc	:: Mathematics	as one of the optional subject re (w.e.f. 2020-21 and onward	•	llabus ı	under C	BCS	
		Damar				Marks		Subject
Sem	Part	Paper Code	Title of Paper	Hours/ Week	IA	Exam	Total	Credits
1	Part – 1 DSC	MATDSCT 1.1	Algebra–I and Calculus–I	4	20	80	100	3
		MATDSCP 1.1	Practicals-1	3	10	40	50	1
		Тс	otal : Hours / Credits	7			150	4
11	Part – 1 DSC	MATDSCT 2.1	Calculus–II and 3-Dimensional Geometry	4	20	80	100	3
		MATDSCP 2.1	Practicals-II	3	10	40	50	1
		Тс	otal : Hours / Credits	7			150	4

	B.S	c.: Mathematics	as one of the optional subject re (w.e.f. 2021-22 and onward		labus u	inder Cl	BCS	
Sem	Part	Paper	Title of Paper	Hours/		Marks		Subject
Jein		Code		Week	IA	Exam	Total	Credits
	Part – 1	MATDSCT3.1	Algebra-II, Real analysis and Differential Equations	4	20	80	100	3
l III	DSC	MATDSCP 3.1	Practicals-III	3	10	40	50	1
	Part – 2	MATSECT 3.2	Set Theory and Theory of	2	10	40	50	2
	SEC	MATSECT 3.2	Equations	2	10	40		
		Тс	otal : Hours / Credits	9			200	6
		MATDSCT 4.1	Vector Calculus, Infinite Series and Deferencial Equations	4	20	80	100	3
ı٧	DSC	MATDSCP 4.1	Practicals-IV	3	10	40	50	1
	Part - 2 SEC	MATSECT 4.2	Fourier Transforms	2	10	40	50	2

Sem	Part	Paper	e.f. 2022-23 and onwards) Title of Paper	Hours/		Marks		Subje
Jein	raii	Code		Week	IA Exam 20 80 10 40 20 80 20 80 20 80 20 80 20 80 20 80 10 40 20 80 10 40 10 40 10 40 10 40 10 40 20 80 10 40 20 80 10 40 20 80 10 40 20 80 20 80 20 80 20 80 20 80 20 80 20 80 20 80 20 80	Exam	Total	Credi
		MATDSET 5.1	Real Analysis	4	20	80	100	3
		MATDSEP 5.1	Practicals-V	3	10	40	50	1
		MATDSET 5.2A						
		(Elective-I)	Numerical Analysis and Difference Equations	4	20	80	100	3
	Part – 1	MATDSEP 5.2A			10	10	50	
	DSE	(Elective-I)	Practicals	3	10	40	50	1
ν		MATDSET5.2B						
		(Elective-II)	Dynamics and Calculus of Variation	4	20	80	100	3
		MATDSEP 5.2B		_	10	10	50	
		(Elective-II)	Practicals	3	10	40	50	1
	Part – 2			_	10	10	50	
	SEC	MATSECT 5.3	Number theory	2	10	40	50	2
		Total : H	Hours / Credits	16			350	10
e: Student	ts have to cho	ose either Elective-I	or Elective-II	_ I I			II	
		MATDSET 6.1	Complex Analysis and Ring Theory	4	20	80	100	3
		MATDSEP 6.1	Practicals	3	10	40	50	1
		MATDSET 6.2A						
		(Elective-III)	Differential Equations	4	20	80	100	3
	Part - 1 -	MATDSEP 6.2A		3	10	40	50	1
	DSE	(Elective-III)	Practicals	5	10	40	50	I
VI		MATDSET6.2B					100	
		(Elective-IV)	Topology and Laplace Transforms	4	20	80	100	3
		MATDSEP 6.2B		3	10	40	50	1
		(Elective-IV)	Practicals		10	40	50	I
	Part – 2	MATSECT 6.3		2	10	40	50	2
	SEC	MATSECT 0.5	Graph Theory		10	40	50	2
		Total • k	Hours / Credits	17			350	10

16. COMPUTER SCIENCE

	BSc.: Co	mputer Science	as one of the optional subjectional (w.e.f. 2020-21 onwards		l syllat	ous as p	er CBC	S
6	Deut	Paper		Hours/				Subject
Sem	Part	Code	Title of Paper	Week	IA	Exam	Total	Credits
	Part – 1	CPSDSCT1.1	Digital Logic & Comp. Design	4	20	80	100	3
I	DSC	CPSDSCP1.1	Digital Logic & Comp. Design – Lab	3	10	40	50	1
		Tota	al : Hours / Credits	7			150	4
				1 1		1		
	Part – 1	CPSDSCT2.1	Programming in C	4	20	80	100	3
n	DSC	CPSDSCP2.1	Programming in C - Lab	3	10	40	50	1
		Tota	Total : Hours / Credits				150	4

E	3Sc.: Comp	uter Science as	one of the optional subject rev (w.e.f. 2021-22 onwards)	vised syl	labus	as per	CBCS	
Sem	Part	Paper	Title of Paper	Hours/		Mark	s	Subject
Sem	Fall	Code	The OF Paper	Week	IA	Exam	Total	Credits
	Part – 1	CPSDSCT3.1	Data-Structures using C	4	20	80	100	3
	DSC	CPSDSCP3.1	Data-Structures using C – Lab	3	10	40	50	1
111	Part – 2 SEC	CPSSECP3.2	Internet and e-Resources	2	10	40	50	2
		Т	otal : Hours / Credits	9	10		200	6
				T		1		
	Part – 1	CPSDSCT4.1	Operating System	4	20	80	100	3
	DSC	CPSDSCP4.1	Operating System using Unix Lab	3	10	40	50	1
IV	Part – 2 SEC	CPSSECP4.2	Multimedia Technology	2	10	40	50	2
		То	Total : Hours / Credits				200	6



Sem	Part	Paper	Title of Paper	Hours/		Marks		Subject
Jem	, are	Code		Week	IA	Exam	Total	Credits
		CPSDSET5.1	Computer Networks	4	20	80	100	3
		CPSDSEP5.1	Computer Networks Lab	3	10	40	50	1
	Part – 1	CPSDSET5.2A	Elective-1 RDBMS	4	20	80	100	3
	DSE	CPSDSEP5.2A	Elective-1 RDBMS Lab	3	10	40	50	1
ν		CPSDSET5.2B	Elective-II Java Programming	4	20	80	100	3
		CPSDSEP5.2B	Elective-II Java Programming Lab	3	10	40	50	1
-	Part – 2 SEC	CPSSECT5.3	Fundamental of e-Governance	2	10	40	50	2
		Total : Hours / Credits					350	10
Note:	Students ha	ave to choose eit	her Elective-I or Elective-II	<u> </u>				
		CPSDSET6.1	Web Technology	4	20	80	100	3
		CPSDSEP6.1	Web Technology Lab	3	10	40	50	1
	Part – 1	CPSDSET6.2A	Elective-III Python	4	20	80	100	3
	DSE	CPSDSEP6.2A	Elective-III Python Lab	3	10	40	50	1
VI		CPSDSET6.2B	Elective-IV PHP	4	20	80	100	3
		CPSDSEP6.2B	Elective-IV PHP-Lab	3	10	40	50	1
	Part – 2 SEC	CPSSECT6.3	Cyber Laws	2	10	40	50	2
		Tot	al : Hours / Credits	17		1	350	10

(T: Theory, P: Practical, CC/EA: Co-curricular/Extension Activities

17. ZOOLOGY

		(With effe	ect from the academic year 20	020-21 on	ward	ls)		
a		Paper		Hour		Mark	Subject	
Sem	Part	Code	Title of the Paper	s/ Week	IA	Exam	Total	Credits
	Part – 1	ZOODSCT 1.1	Animal discovery	4	20	80	100	3
Ι	DSC	ZOODSCP 1.1	Practicals-1	3	10	40	50	1
		Tota	al: Hours / Credits	7			150	4
	Part – 1	ZOODSCT 2.1	Comparative anatomy and development biology of vertebrates	4	20	80	100	3
II	DSC -	ZOODSCP 2.1	Practicals-2	3	10	40	50	1
		Tot	7			150	4	

		(With effe	ct from the academic year 202	1-22 on	wards)			
Sem	Part	Paper	Title of the Paper	Hours/ Week	Marks			Subject
Sem		Code			IA	Exam	Total	Credits
	Part – 1		Physiology, Biochemistry and history	4	20	80	100	3
III	DSC	ZOODSCP3.1	Practicals-3	3	10	40	50	1
	Part – 2 SEC	ZOOSECT3.2	Medical diagnostics	2	10	40	50	2
		Tota	9			200	6	
	Part – 1	ZOODSCT4.1	Genetics and evolutionary biology	4	20	80	100	3
IV	DSC	ZOODSCP4.1	Practicals-4	3	10	40	50	1
	Part – 2 SEC	ZOOSECT4.2	Aquarium fish keeping	2	10	40	50	2
		Tota	al: Hours / Credits	9			200	6

		Paper	Title of Paper	Hours/		Marks	5	Subject
Sem	Part	Code		Week	IA	Exam	Total	Credits
		ZOODSET 5.1	Applied zoology and Ethology	4	20	80	100	3
		ZOODSEP 5.1	Practicals-5	3	10	40	50	1
	Part – 1	ZOODSET 5.2A (Elective I)	Cell biology, Biotechnology, Biostatics and research methodology	4	20	80	100	3
V	DSE	ZOODSEP 5.2A (Elective I)	Practicals-5A	3	10	40	50	1
•		ZOODSET 5.2B (Elective II)	Immunology	4	20	80	100	3
		ZOODSEP 5.2B (Elective II)	Practicals-5B	3	10	40	50	1
	Part – 2 SEC	ZOOSECT5.3	Apiculture	3	10	40	50	2
		Total	17			350	10	
Note:	Students	s have to choose ei	ther Elective-I or Elective-II	1 1		11		1
		ZOODSET 6.1	Reproductive biology	4	2	0 80	0 10	00 3
		ZOODSEP 6.1	Practicals-6	3	1	0 40	0 5	0 1
	Part – 1 DSE	ZOODSET 6.2A (Elective III)	Ecology, Zoogeography and wildlife conservation.	4	2	0 80	0 10	00 3
VI		ZOODSEP 6.2A (Elective III)	Practicals-6A	3	1	0 40) 5	0 1
		ZOODSET 6.2B (Elective IV)	Insects, Vectors and Diseases	4	2	0 80	0 10	00 3
		ZOODSEP 6.2B (Elective IV)	Practicals-6B	3	1	0 40	0 5	0 1
	Part – 2 SEC	ZOOSECT 6.3	Apiculture	3	1	0 40	0 5	0 2
		Tota	17			35	50 10	

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18. GEOLOGY

1	9. B.Sc.:	•••	one of the optional subject 20. (w.e.f. 2020-21 and onv		sylla	bus un	der Cl	BC2
		Paper		Hours/	Marks			Subject
Sem	Part	Code	Title of Paper	Week	IA	Exam	Total	Credits
1	Part – 1 DSC	GEODSCT 1.1	Dynamic Geology, Geomorphology & Field Geology	4	20	80	100	3
		GEODSCP 1.1	Practicals-I	3	10	40	50	1
		Total : Hours / Credits					150	4
	Part – 1	GEODSCT 2.1	Optical Mineralogy Crystallography & Mineralogy	4	20	80	100	3
11	DSC	GEODSCP 2.1	Practicals-II	3	10	40	50	1
		Tot	al : Hours / Credits	7			150	4

	B.So	:.: Statistics as	one of the optional subject rev (w.e.f. 2021-22 and onwa	•	abus u	nder C	BCS	
Sem	Dout	Paper		Hours/	Marks			Subject
Sem	Part	Code	Title of Paper	Week	IA	Exam	Total	Credits
	Part – 1 DSC	GEODSCT3.1	Petrology: Igneous Sedimentary & Metamorphic	4	20	80	100	3
m		GEODSCP 3.1	Practicals-III	3	10	40	50	1
	Part – 2 SEC	GEOSECT 3.2	Energy Resources	2	10	40	50	2
		1	9			200	6	
	1					1	n	
	Part – 1 DSC	GEODSCT 4.1	Palaeontology, Principles of Stratigraphy & Indian Stratigraphy	4	20	80	100	3
IV		GEODSCP 4.1	Practicals-IV	3	10	40	50	1
	Part – 2 SEC	GEOSECT 4.2	Fundamentals of Remote Sensing	2	10	40	50	2
		٦	Total : Hours / Credits	9			200	6

		Paper Code	Title of Paper	Hours/		Marks		Subject Credits
Sem	Part			Week	IA	Exam	Total	
		GEODSET 5.1	Structural Geology and Surveying	4	20	80	100	3
		GEODSEP 5.1	Practicals-V	3	10	40	50	1
	Part – 1	GEODSET 5.2A (Elective-1)	Ore Processes, Indian Mineral Deposits and Exploration Geology	4	20	80	100	3
ν	DSE	GEODSEP 5.2A (Elective-I)	Practicals	3	10	40	50	1
·		GEODSET5.2B (Elective-II)	Marine Geology	4	20	80	100	3
		GEODSEP 5.2B (Elective-II)	Practicals	3	10	40	50	1
	Part – 2 SEC	GEOSECT 5.3	Gemology	2	10	40	50	2
		Total : H	16			350	10	
ote:	Students hav	ve to choose either E	lective-I or Elective-II					
	Part – 1 DSE	GEODSET 6.1	Hydrogeology & Geochemistry	4	20	80	100	3
		GEODSEP 6.1	Practicals	3	10	40	50	1
		GEODSET 6.2A (Elective-III)	Remote Sensing & GIS	4	20	80	100	3
		GEODSEP 6.2A (Elective-III)	Practicals	3	10	40	50	1
VI		GEODSET6.2B (Elective-IV)	Environmental Geology & Engineering Geology	4	20	80	100	3
		GEODSEP 6.2B (Elective-IV)	Practicals	3	10	40	50	1
	Part – 2 SEC	GEOSECT 6.3	Mining Geology	2	10	40	50	2
		Total : H	17			350	10	

(T: Theory, P: Practical, CC/EA: Co-curricular/Extension Activities

AECC: Ability Enhancement Compulsory Course, DSC: Discipline Specific Course

DSE: Discipline Specific Elective, SEC: Skill Enhancement Course)

Note: Duration of examinations is 03 Hrs for 80 Marks theory and 02 hrs for 40 marks theory. For practical's duration of examination is 03 Hrs.

IQAC, Co-ordinator A V C D Science College

Principal, Arte & KCP Sc. College