

S.Y.B.Sc. (Sem. I) students shall offer three out of four subjects offered by him in the First Year B.Sc. In addition, he shall offer one subject of one language

S.Y.B.Sc. (Semester Pattern)

Semester I

SEM. I (Revised 2008 Pattern)					
Subject Name	Subject Code	Subject Code	Subject Code	Subject Code (out of 40 (Practical) from Oct. 2011)	
11. Mathematics	51111	511A1	OR 511B1	51151	
12. Physics	51211	512A1	OR 512B1		
13. Chemistry	51311	51321			
14. Botany	51411	51421			
15. Zoology	51511	51521			
16. Geology	51611	51621			
17. Statistics	51711	51721			
18. Geography	51811	51821			
19. Microbiology	51911	51921			
20. Exp.Psychology					
20. Psychology	52011	52021			
21. Stat.Techniques	52111	52121			
22. Electronic Science	52211	52221	522A1 (Digital System Design from Oct. 2011)		
23. Defence & Strategic Studies	52311	52321	52331		
24. Environmental Science	52411	52421			
32. English	53011				
33. Marathi	53111				
34. Hindi	53211				
35. Sanskrit	53311				
37. Arabic Functional	53711				
38. Urdu General Paper II	53811				

S.Y.B.Sc. (Sem. II) students shall offer three subjects offered by him in the S.Y.B.Sc. (Sem. I). In addition, he shall offer one subject of previous language and compulsory Environmental Awareness (held at college only). (10+1=11 subjects)

S.Y.B.Sc. (Semester Pattern)

Semester II

Subject Name	SEMESTER II (2008 Pattern)			
	Subject Code	Subject Code	Subject Code (Practical) (out of 80)	Subject Code (Practical) (From Oct. 2011) (out of 40)
11. Mathematics	51112	511A2 OR 511B2	51132	51152
12. Physics	51212	51222	51232	
13. Chemistry	51312	51322	51332	
14. Botany	51412	51422	51432	
15. Zoology	51512	51522	51532	
16. Geology	51612	51622	51632	
17. Statistics	51712	51722	51732	
18. Geography	51812	51822	51832	
19. Microbiology	51912	51922	51932	
20. Psychology	52012	52022	52032	
21. Stat. Techniques	52112	52122	52132	
22. Electronic Science	52212	52222	52232	522A2 (Electronic Instrumentation from Oct. 2011)
23. Defence & Strategic Studies	52312	52322	52332	
24. Environmental Science	52412	52422	52432	
32. English	53012			
33. Marathi	53112			
34. Hindi	53212			
35. Sanskrit	53312			
37. Arabic Functional	53712			
38. Urdu General Paper II	53812			
*36. Environmental Awareness (Compulsory at college only)	59992			

T.Y.B.Sc. students shall offer one of the three subjects offered by him in Second Year B.Sc. as his Principal Subject.

Special Subject Code & Name	T.Y.B.Sc. Semester Pattern 2008 SEMESTER III								
	Theory Paper	I	II	III	IV	V	VI	VII	VIII
11. (A) Mathematics	61113	61123	61133	61143	61153	61163	Elective Code	Elective Code	61193 Pract.
12. (B) Physics	61213	61223	61233	61243	61253	Elective Code			
13. (C) Chemistry	61313	61323	61333	61343	61353	Elective Code			
14. (D) Botany	61413	61423	61433	61443	61453	61463			
15. (E) Zoology	61513	61523	61533	61543	615A3 OR 615B3	61563			
16. (F) Geology	61613	61623	61633	61643	61653	61663			
17. (G) Statistics	61713	61723	61733	61743	61753	Elective Code			
18. (H) Geography	61813	61823	61833	61843	61853	61863			
19. (I) Microbiology	61913	61923	61933	61943	61953	61963			
22. (L) Electronics	62213	62223	62233	62243	62253	Elective Code			
23. (M) Defence Studies	62313	62323	62333	62343	62353	Elective	Elective	Elective	Elective
24. (N) Environmental Science	62413	62423	62433	62443	62453	62463			
SEMESTER IV							PRACTICAL PAPER		
Theory Paper	I	II	III	IV	V	VI	I	II	III
11. (A) Mathematics	61114	61124	61134	61144	61154	61164	Elective Code	Elective Code	61194 Pract.
12. (B) Physics	61214	61224	61234	61244	61254	Elective	61274	61284	61294
13. (C) Chemistry	61314	61324	61334	61344	61354	Elective	61374	61384	61394
14. (D) Botany	61414	61424	61434	61444	61454	Elective	61474	61484	61494
15. (E) Zoology	61514	61524	61534	61544	615A4 OR 615B4	61564	61574	61584	61594
16. (F) Geology	61614	61624	61634	61644	61654	61664	61674	61684	61694
17. (G) Statistics	61714	61724	61734	61744	61754	Elective	61774	61784	61794
18. (H) Geography	61814	61824	61834	61844	61854	61864	61874	61884	61894
19. (I) Microbiology	61914	61924	61934	61944	61954	61964	61974	61984	61994
22. (L) Electronics	62214	62224	62234	62244	62254	Elective	62274	62284	62294
23. (M) Defence Studies	62314	62324	62334	62344	62354	Elective	Elective	Elective	Elective
24. (N) Environmental Science	62414	62424	62434	62444	62454	62464	62474	62484	62494

VOCATIONAL & RESTRUCTURE COURSES

(Any one Group of the following)

S.Y.B.Sc. (Semester)

Subject	Semester I		Semester II		
	NEW (2008 Pattern)		NEW (2008 Pattern)		
	Theory Paper I	Theory Paper II	Theory	Theory	Practical III
56. Industrial Chemistry	55611	55621	55612	55622	55632
57. Bio-Technology	55711	55721	55712	55722	55732
80. Photography Audio Visual Production	58011	58021	58012	58022	58032
81. Electronic Equip. & Maintenance	58111	58121	58112	58122	58132
87. Computer Hardware & Administration Network	58711	58721	58712	58722	58732
89. Seed Technology	58911	58921	58912	58922	58932
82. Ind. Microbiology	58211	58221	58212	58222	58232
RESTRUCTURE :					
'C' Component * _____					
D/E Component * _____					

Subject	T.Y.B.Sc. (Semester Pattern) Vocational (2008 Pattern)					
	Semester III (Theory)		Semester IV (Theory)		Semester IV (Practical)	
56. (O) Industrial Chemistry	65653 V	65663 VI	65654 V	65664 VI	65694 III	
57. (P) Bio-Technology	65753 V	65763 VI	65754 V	65764 VI	65794 III	
80. (Q) Photography Audio Visual Production	68053 V	68063 VI	68054 V	68064 VI	68094 III	
81. (R) Electronic Equip. Maintenance	68153 V	68163 VI	68154 V	68164 VI	68194 III	
82. Ind. Microbiology	68253 V	68263 VI	68254 V	68264 VI	68294 III	
87. (S) Computer Hardware Administration Network	68753 V	68763 VI	68754 V	68764 VI	68794 III	
89. (T) Seed Technology	68953 V	68963 VI	68954 V	68964 VI	68994 III	
92. Business Entrepreneurship & Development						69214 (Grade)
RESTRUCTURE :						
'C' Component * _____						
D/E Component * _____			65504 * Project work			

* Please write name of the Subject and Code No. of Restructure Course given in the list available in the college office.

BIOTECHNOLOGY**SEMESTER - I**

Subject Name	Sem-patt-2006	Revised Course (Sem.-pat-2008)
Genetics & Immunology (Theory)	24011	54011
Cell Biology (Theory)	24021	54021
Metabolic Pathways (Theory)	24041	
Molecular Biology (Theory)		54041
Fundamentals of Ecology & Environment (Theory)	24051	
Exercises In Cell Biology & Genetics (Practical)	24131	54131
Techniques in Molecular Biology (Practical)		54231

SEMESTER - II

Subject Name	Sem. Pattern 2006
Molecular Biology (Theory)	24062
Plant & Animal Tissue Culture (Theory)	24082
English (Theory)	24072
Techniques in Molecular Biology (Practical)	24232
Tissue Culture Techniques (Practical)	24332

Subject Name	Sem. Pattern 2008
Metabolic Pathways (Theory)	54042
Environmental Biology & Biotechnology (Theory)	54062
English (Theory)	54072
Plant & Animal Tissue Culture (Theory)	54082
Tissue Culture Techniques (Practical)	54332

SEMESTER - III

Subject Name	<u>2006 Pattern</u>
Microbial Biotechnology (Theory)	34013
Recombinant DNA Technology (Theory)	34023
Biodiversity & Systematics (Theory)	34043
Techniques in Genetics Engg. (Theory) (Practical)	34133
Project (to be continued) (Semester IV)	34233

SEMESTER - IV

Subject Name	<u>2006 Pattern</u>
Large Scale Manufacturing Process (Theory)	34014
Applications of Biotechnology in Agriculture & Health (Theory)	34024
Animal and Plant Development (Theory)	34044
Development Biology (Practical)	
Development Biology & Fermentation (Practical)	34134
Project	34234

SEMESTER - III

Subject Name	<u>2008 Pattern</u>
Microbial Biotechnology	64013
Animal and Plant Development	64023
Biodiversity & Systematics	64043
Development Biology and Microbial Biotechnology (Practical)	64133
Project (to be continued in Sem. IV)	64233

SEMESTER - IV

Subject Name	<u>2008 Pattern</u>
Large Scale Manufacturing Process	64014
Biotechnology in Agriculture & Health	64024
Recombinant DNA Technology	64044
Techniques in Genetic Engg. (Practical)	64134
Project	64234

S.Y.B.Sc. (Sem. I) students shall offer three out of four subjects offered by him in the First Year B.Sc. In addition, he shall offer one subject of one language

S.Y.B.Sc. (Semester 2013 Pattern)

Semester I

SEM. I (Revised 2013Pattern)					
Subject Name	Subject Code	Subject Code		Subject Code	Subject Code (out of 40 (Practical))
11. Mathematics	81111	811A1	OR	811B1	81151
12. Physics	81211	812A1	OR	812B1	
13. Chemistry	81311	81321			
14. Botany	81411	81421			
15. Zoology	81511	81521			
16. Geology	81611	81621			
17. Statistics	81711	81721			
18. Geography	81811	81821			
19. Microbiology	81911	81921			
20. Psychology	82011	82021			
21. Stat. Techniques	82111	82121			
22. Electronic Science	82211	82221			
23. Defence & Strategic Studies	82311	82321		82331	
24. Environmental Science	82411	82421			
32. English	83011				
33. Marathi	83111				
34. Hindi	83211				
35. Sanskrit	83311				
37. Arabic Functional	83711				
38. Urdu General Paper II	83811				

VOCATIONAL & RESTRUCTURE COURSES

(Any one Group of the following)

S.Y.B.Sc. (Semester 2013)

Subject	Semester I			
	REVISED (2013 Pattern)			
	Theory Paper I	Theory Paper II		
56. Industrial Chemistry	85611	85621		
57. Bio-Technology	85711	85721		
80. Photography and Audio Visual Production	88011	88021		
81. Electronic Equip. Maintenance	88111	88121		
87. Computer Hardware & Network Administration	88711	88721		
89. Seed Technology	88911	88921		
82. Ind. Microbiology	88211	88221		
RESTRUCTURE : 'C' Component * _____				
D/E Component * _____				

B.SC. BIOTECHNOLOGY 2013 PATTERN

Subject Name	Sem-2013patt.
Genetics & Immunology (Theory)	84011
Cell Biology (Theory)	84021
Environmental Biology and Biotechnology (Theory)	84041
Practicals in Environmental Biotechnology	84131
Practicals in Cell Biology Genetics	84231

B.SC. ANIMATION**Semister - I**

Subject Name	Sub -Code
(AN-2101) Technical English - I	52511
(AN-2102) 3-D Animation -I	52521
(AN-2103) Digital Art -I	52531
(AN-2104) Multimedia Systems	52541
AN-2105) Animation Techniques -I	52551
AN-2106) Production Process -I	52561

Semister - II

Subject Name	Sub -Code
(AN-2201) Technical English - II	52512
(AN-2202) 3-D Animation -II	52522
(AN-2203) Digital Art -II	52532
(AN-2204) Multimedia Communication	52542
AN-2205) Animation Techniques -II	52552
AN-2206) Production Process -II	52562
Practical Course I Based on AN-2202	52572
Practical Course II Based on AN-2203	52582
Practical Course III Based on AN-2205 & AN-2206	52592

Semister - III

Subject Name	Sub -Code
Script Writing - I	62513
Content Development Direction -I	62523
Gaming Technology	62533
Digital Editing & Motion Graphics-I	62543
Visual Effect -I	62553
V.F.X. -I	62563

Semister - IV

Subject Name	Sub -Code
Script Writing - II	62514
Content Development Direction -II	62524
Gaming Production	62534
Digital Editing & Motion Graphics-II	62544
Visual Effect -II	62554
V.F.X. -II	62564
Practical Course I Based on Theory Paper II (outof 100)	62574
Practical Course II Based on Theory Paper III &IV (outof 100)	62584
Practical Course III Based on Theory Paper V & VI (outof 100)	62594

T.Y.B.Sc. Elective Paper Subject Coding List

<i>Sub. Code</i> <i>Subject Name</i>	<i>Sub. Code</i> <i>Subject Name</i>
Sem. III Mathematics	Sem.- III Defence and Strategic Studies <i>(Choose any one Paper from each group)</i>
611A3 Operation Research	
611D3 Combinatorics	
611E3 Lattice Theory	
611F3 ‘C’ Programming	Paper - VI
611N3 Number Theory	623A3 Indian Military System (I)
611P3 Differential Geomtry	623B3 Maratha Military System (I)
Sem. IV Mathematics	623C3 Indian War since Independence (I)
611D4 Computational Geomtry	Paper – VII
611E4 Optimization Techniques	623D3 Military Sociology
611F4 Improper Integrals and Laplace Transforms	623E3 Defence Journalism
611G4 ‘C’ Programming	623F3 Defence Preparedness of India (I)
611H4 Dynamics	Paper – VIII
611N4 Lebseque Integration	623G3 Armed Conflict and Human Rights
Sem. III Physics	623H3 International Organisation and National Security
612A3 Astronomy and Astrophysics	623J3 International Law
612B3 Biophysics	Paper-IX
612F3 Motion Picture Physics	623K3 Defence Management In India
612J3 Medical Electronics	623L3 Internal Security of India (I)
612L3 Elements of Materials Science	623M3 India’s Maritime Security (I)
Sem. IV Physics	Sem.- IV Defence and Strategic Studies <i>(Choose any one Paper from each group)</i>
612D4 Electro Acoustics & Entertainment Electronics	
612G4 Renewable Energy Sources	Paper-VI
612J4 Physics of Nanomaterials	623A4 Indian Military System (II)
612L4 Lasers	623B4 Maratha Military System (II)
612P4 Microcontrollers	623C4 Indian War since Independence (II)
Sem. III Chemistry	Paper-VII
613A3 Nuclear Chemistry	623D4 Military Psychology
613B3 Polymer Chemistry	623E4 Defence Journalism and National Security
613C3 Bio-Chemistry	623F4 Defence Preparedness of India (II)
613D3 Environmental Chemistry	Paper-VIII
613E3 Agriculture Chemistry	623G4 Refugees Studies
Sem. IV Chemistry	623H4 Study of United Nations
613A4 Nuclear Chemistry	623J4 Laws of War and Peace
613B4 Polymer Chemistry	Paper-IX
613C4 Bio-Chemistry	623K4 Management of Defence Production and Logistics in India
613D4 Environmental Chemistry	623L4 Internal Security of India (II)
613E4 Dairy Chemistry	623M4 India’s Maritime Security (II)
Sem.- III Statistics	
617A3 Operations Management	
617B3 Acturial Statistics	
617D3 Time Series Analysis	
Sem.- IV Statistics	
617B4 Statistical Ecology	
617D4 Medical Statistics	
617E4 Statistical Computing Using R Software	
Sem.- III Electronics	
622F3 Fiber Optics and Fiber Optic Communication	
622G3 Sensor & Actuators	
Sem.- IV Electronics	
622G4 Instrumentation	
622H4 Consumer Electronics	

S.Y. B.Sc (Sem. I) students shall offer three out of four subjects offered by him in the First Year B.Sc. In addition, he shall offer one subject of one language. **Backlog students of Sem I (2003 Patt.) will have to appear for equivalence Sem . I (2008 Patt) subjects.**

Semester I 2003 Pattern with Equivalence

Subject Name	Equiv. New Subject code (2008 Patt) Paper I	Equiv . New Subject code (2008 Patt) Paper II	Equiv. New Subject code (2008 Patt)	Old Subject code 2003 Paper I, Paper II, Practical		
				(Only for office Information)		
(For Students) (2003 Pattern)				I	II	III
11. Mathematics	51132 (Practical)	51111	511A1 or 511B1	21111	21121	21131 OR 21141
12. Physics	51211	512A1 or 512B1		21211	21221	
13. Chemistry	51311	51321		21311	21321	
14. Botany	51411	51421		21411	21421	
15. Zoology	51511	51521		21511	21521	
16. Geology	51611	51621		21611	21621	
17. Statistics	51711	51721		21711	21721	
18. Geography	51811	51821		21811	21821	
19. Microbiology	51911	51921		21911	21921	
20. Exp. Psychology	52011	52021		22011	22021	
21. Stat. Techniques	52111	52121		22111	22121	
22. Electronic Science	52211	52221		22211	22221	
23. Defence & Strategic Studies	52311	52321	52331	22311	22321	22331
24. Environmental Science	52411	52421		22411	22421	
32. English	53011			23011		
33. Marathi	53111			23111		
34. Hindi	53211			23211		
35. Sanskrit	53311			23311		
37. Arabic Functional	53711					
38. Urdu General Paper II	53811					

S.Y. B.Sc. (Sem.II) students shall offer three subject offered by him in the S.Y. B.Sc. (Sem.I) . In addition, he shall offer one subject of previous language and compulsory Environment Awareness (held at college only). (10+1=11 subjects). **Backlog students of Sem II (2003 Patt.) will have to appear for equivalence Sem. II (2008 Patt) subjects.**

S.Y.B.Sc. (Semester Pattern)

Semester II 2003 Pattern with Equivalence

Subject Name	Equiv. New Subject code (2008 Patt) Paper I	Equiv. New Subject code (2008 Patt) Paper II	Equiv. New Subject code (2008 Patt) Paper III	Equiv. New Subject code (2008 Patt) Prac.	Old Subject code 2003 paper I, paper II, paper III, Practical		
					(Only for Office Information)		
(For Students) (2003 Pattern)					I	II	III Pra.
11. Mathematics	51112	511A2	511B2	511B2	21112	21122	21132 OR 21142
12. Physics	51212	51222		51232	21212	21222	21232
13. Chemistry	51312	51322		51332	21312	21322	21332
14. Botany	51412	51422		51432	21412	21422	21432
15. Zoology	51512	51522		51532	21512	21522	21532
16. Geology	51612	51622		51632	21612	21622	21632
17. Statistics	51712	51722		51732	21712	21722	21732
18. Geography	51812	51822		51832	21812	21822	21832
19. Microbiology	51912	51922		51932	21912	21922	21932
20. Exp. Psychology	52012	52022		52032	22012	22022	22032
21. Stat. Techniques	52112	52122		52132	22112	22122	22132
22. Electronic Science	52212	52222		52232	22212	22222	22232
23. Defence & Strategic Studies	52312	52322		52332	22312	22322	22332
24. Environmental Science	52412	52422		52432	22412	22422	22432
32. English	53012				23012		
33. Marathi	53112				23112		
34. Hindi	53212				23212		
35. Sanskrit	53312				23312		
37. Arabic Functional	53712						
38. Urdu General Paper II	53812						
36. Environmental Awareness (Compulsory at college only)	59992				29992		

Backlog students of Sem I & II (2003 patt.) will have to appear equivalence Sem I & II (2008 Patt.) subject.
(Pattern with Equivalence)

Sem. I & II (2003)

VOCATIONAL & RESTRUCTURE COURES

(Any one Group of the following)

S.Y.B.Sc. (Semester)

(Reference List)

Subject	Semester I		Semester I	
	NEW (2008 pattern) Equivalence Subject (for Students)		OLD (2003 pattern) (Only office information)	
	Theory Paper I	Theory Paper II	Theory Paper I	Theory Paper II
56. Industrial Chemistry	55611	55621	25611	25621
57. Bio-Technology	55711	55721	25711	25721
80. Still Photography and Audio Product	58011	58021	28011	28021
81. Electronic Equip. & Maintenance	58111	58121	28111	28121
87. Computer Maintenance	58711	58721	28711	28721
89. Seed Technology	58911	58921	28911	28921
82. Ind. Microbiology	58211	58221	28211	28221
RESTRUCTURE "C" Component				
D/E/ Component				

(Any one Group of the following)

S.Y.B.Sc. (Semester)

(Reference List)

Subject	Semester II			Semester II		
	NEW (2008 pattern) Equivalence Subject (for Students)			OLD (2003 pattern) (Only office information)		
	Theory Paper I	Theory Paper II	Practical Paper III	Theory Paper I	Theory Paper II	Practical Paper III
56. Industrial Chemistry	55612	55622	55632	25612	25622	25632
57. Bio-Technology	55712	55722	55732	25712	25722	25732
80. Still Photography and Audio Product	58012	58022	58032	28012	28022	28032
81. Electronic Equip. & Maintenance	58112	58122	58132	28112	28122	28132
87. Computer Maintenance	58712	58722	58732	28712	28722	28732
89. Seed Technology	58912	58922	58932	28912	28922	28932
82. Ind. Microbiology	58212	58222	58232	28212	28222	28232
RESTRUCTURE "C" Component						
D/E/ Component						

B.Sc. Sem. III (2003 pat.) students will have to appear T.Y.B.Sc. (2008 Pat.) EQUIVALENCE Course

T.Y.B.Sc students shall offer one of the three subjects offered by him in Second Year B.Sc. as his Principal Subject.

Subject Code & Name	T.Y. B.Sc Semester pattern 2003 SEMESTER III (only for office information)								
	I	II	III	IV	V	VI	VII	VIII	IX Practical
Theory paper									
11. (A) Mathematics	31113	31123	31133	31143	31153	31163	Elective Code	Elective Code	
12.(B) Physics	31213	31223	31233	31243	31253	Elective Code			
13. (C) Chemistry	31313	31323	31333	31343	31353	Elective Code			
14. (D) Botany	31413	31423	31433	31443	31453	31463			
15. (E) Zoology	31513	31523	31533	31543	31553	31563			
16.(F) Geology	31613	31623	31633	31643	31653	31663			
17.(G) Statistics	31713	31723	31733	31743	31753	Elective Code			
18. (H) Geography	31813	31823	31833	31843	31853	31863			
19. (I) Microbiology	31913	31923	31933	31943	31953	31963			
22. (L) Electronic	32213	32223	32233	32243	32253	Elective Code			
23.(M) Defence Studies	32313	32323	32333	32343	32353	Elective Code	Elective Code	Elective Code	Elective Code
24.(N) Environmental Science	32413	32423	32433	32443	32453	32463			

Subject Code & Name	T.Y. B.Sc Semester pattern 2003 SEMESTER III (For students) Equivalence Subject Code								
	I	II	III	IV	V	VI	VII	VIII	IX Practical
Theory paper									
11. (A) Mathematics	61114	61123	61133	61143	611H4	61163	Elective Code	Elective Code	
12.(B) Physics	61213	61223	61233	61243	61253	Elective Code			
13. (C) Chemistry	61313	61323	61333	61343	61353	Elective Code			
14. (D) Botany	61413	61423	61433	61443	61453	61463			
15. (E) Zoology	61513	61523	61543	61543	61563	61533			
16.(F) Geology	61653	61614	61643	61634	61624	61664			
17.(G) Statistics	61713	61723	61733	61744	61753	Elective Code			
18. (H) Geography	61813	61823	61833	61843	61853	61863			
19. (I) Microbiology	61913	61923	61933	61943	61953	61963			
22. (L) Electronic	62233	62223	62253	62243	62234	Elective Code			
23.(M) Defence Studies	62313	62343	62323	623A3	62353	Elective Code	Elective Code	Elective Code	Elective Code
24.(N) Environmental Science	62413	62423	62433	62443	62453	62463			

T.Y. B.Sc. Sem. III (2003 Pattern) students will have to appear T.Y.B.Sc. (2008 Pattern) Equivalante

T.Y. B.Sc students shall offer one of the three subjects offered by him in Second Year B.Sc. as his Principal Subject.

Special Subject Code & Name	T.Y. B.Sc. Semester Pattern 2003 SEMESTER IV (only for office information)						PRACTICAL PAPER		
	I	II	III	IV	V	VI	I	II	III
Theory paper									
11. (A) Mathematics	31114	31124	31134	31144	31154	31164	Elective Code	Elective Code	31194
12. (B) Physics	31214	31224	31234	31244	31254	Elective Code	31274	31284	31294
13. (C) Chemistry	31314	31324	31334	31344	31354	Elective Code	31374	31384	31394
14. (D) Botany	31414	31424	31434	31444	31454 Code	Elective	31474	31484	31494
15. (E) Zoology	31514	31524	31534	31544	31554	31564	31574	31584	31594
16. (F) Geology	31614	31624	31634	31644	31654	31664	31674	31684	31694
17. (G) Statistics	31714	31724	31734	31744	31754	Elective Code	31774	31784	31794
18. (H) Geography	31814	31824	31834	31844	31854	31864	31874	31884	31894
19. (I) Microbiology	31914	31924	31934	31944	31954	31964	31974	31984	31994
22. (L) Electronic	32214	32224	32234	32244	32254	Elective Code	32274	32284	32294
23. (M) Defence Studies	32314	32324	32334	32344	32354	Elective Code	Elective Code	Elective Code	Elective Code
24. (N) Environmental Science	32414	32424	32434	32444	32454	32464	32474	32484	32494

Subject Code & Name	T.Y. B.Sc Semester Pattern 2003 SEMESTER IV (For students) Equivalence						PRACTICAL PAPER (For Student) Equivalence Subject Code		
	I	II	III	IV	V	VI	I	II (Out of. (80))	III
Theory paper									
11. (A) Mathematics	61114	611F4	61134	61144	61154	61164	Elective Code	Elective Code	31194
12. (B) Physics	61214	61224	61234	61244	61254	Elective Code	61274	61274	61294
13. (C) Chemistry	61314	61324	61334	61344	61354	Elective Code	61374	61384	61394
14. (D) Botany	61414	61424	61434	61444	61454	61464	61474	61484	61494
15. (E) Zoology	61514	61524	61544	61554	61534	61564	61574	61584	61594
16. (F) Geology	61654	61633	61644	61634	61624	61663	61674	61684	61694
17. (G) Statistics	61714	61724	61734	61743	61754	Elective Code	61774	61784	61794
18. (H) Geography	61814	61824	61834	61844	61854	61864	61874	61884	61894
19. (I) Microbiology	61914	61924	61934	61944	61954	61964	61974	61984	61994
22. (L) Electronic	62213	62224	62254	62244	622H4	Elective Code	62274	62284	62294
23. (M) Defence Studies	62314	62344	62324	623A4	62354	Elective Code	Elective Code	Elective Code	Elective Code
24. (N) Environmental Science	62414	62424	62434	62444	62454	62464	62474	62484	62494

Subject	T.Y. B.Sc. (Semester Pattern) Vocational (2003 Pattern) (For Office use Only)					
Theory Paper	Semester III (Theory)		Semester IV (Theory)		Semester VI (Theory)	
56. (O) Industrial Chemistry	35653 V	35663 VI	35654 V	35664 VI	35694 III	
57. (P) Bio-Tecnology	35753 V	35763 VI	35754 V	35764 VI	35794 III	
80. (Q) Still Photography & Audio Product	38053 V	38063 VI	38054 V	38064 VI	38094 III	
81. (R) Electronic Equip. & Maintenance	38153 V	38163 VI	38154 V	38164 VI	38194 III	
82. Ind. Microbiology	38253 V	38263 VI	38254 V	38264 VI	38294 III	
87. (S) Computer Maintenance	38753 V	38763 VI	38754 V	38764 VI	38794 III	
89. (T) Seed Technology	38953 V	38963 VI	38954 V	38964 VI	38994 III	
92. Business Entrepreneurship & Development						39214
RESTRUCTURE: 'C' Computer * ——						
D/E Component * ——			35504 *Project work			

Subject	T.Y. B.Sc. (Semester Pattern) Vocational (2003 Pattern) (For students) Equivalence Subject Code					
Theory Paper	Semester III (Theory)		Semester IV (Theory)		Semester VI (Theory)	
56. (O) Industrial Chemistry	65653 V	65663 VI	65654 V	65664 VI	65694 III	
57. (P) Bio-Technology	65753 V	65763 VI	65754 V	65764 VI	65794 III	
80. (Q) Photography Audio Visual Production	68053 V	68063 VI	68054 V	68064 VI	68094 III	
81. (R) Electronic Equip. & Maintenance	68153 V	68163 VI	68154 V	68164 VI	68194 III	
82. Ind. Microbiology	68253 V	68263 VI	68254 V	68264 VI	68294 III	
87. (S) Computer Hardware Administretion Network	68753 V	68763 VI	68754 V	68764 VI	68794 III	
89. (T) Seed Technology	68953 V	68963 VI	68954 V	68964 VI	68994 III	
92. Business Entrepreneurship & Development						39214
RESTRUCTURE: 'C' Computer * ——						
D/E Component * ——			65504 * Project work			

T.Y.B.Sc. ELECTIVE PAPER-SUBJECT CODING LIST (2003 Pattern)

(18)

(2003 Pattern) for Office

(Elec. 2003 Pattern) for Student

Equivalence Subject Code

Subject Code	Subject Name	Theory Practical	Subject Code	Subject Name	Theory Practical
Sem. III—Mathematics			Sem. III—Mathematics		
311A3	OPERATION RESEARCH I	Theory	611A3	OPERATION RESEARCH	Theory
311B3	GRAPH THEORY	Theory	611D3	COMBINATORICS	Theory
311C3	COMPUTATIONAL MATHEMATICS I	Theory	611F3	“C” PROGRAMMING	Theory
311D3	COMBINATORICS	Theory	611D3	COMBINATORICS	Theory
311N3	NUMBER THEORY	Theory	611N3	NUMBER THEORY	Theory
311P3	DIFFERENTIAL GEOMETRY I	Theory	611P3	DIFFERENTIAL GEOMETRY	Theory
311R3	COMPUTATIONAL MATHEMATICS III	Theory	611N3	NUMBER THEORY	Theory
311T3	ASTRONOMY I	Theory	611P3	DIFFERENTIAL GEOMETRY	Theory
Sem. IV—Mathematics			Sem. IV—Mathematics		
311A4	OPERATION RESEARCH II	Theory	611E4	OPTIMIZATION TECHNIQUES	Theory
311B4	LATICE THEORY	Theory	611E3	LATICE THEORY	Theory
311C4	COMPUTATIONAL MATHEMATICS II	Theory	611G4	“C” PROGRAMMING	Theory
311D4	COMPUTATIONAL GEOMETRY	Theory	611D4	COMPUTATIONAL GEOMETRY	Theory
311N4	LEBSEQUÉ INTEGRATION	Theory	611N4	LEBSEQUÉ INTEGRATION	Theory
311P4	DIFFERENTIAL GEOMETRY II	Theory	611P3	DIFFERENTIAL GEOMETRY	Theory
311R4	COMPUTATIONAL MATHEMATICS IV	Theory	611D4	COMPUTATIONAL GEOMETRY	Theory
311T4	ASTRONOMY II	Theory	611D4	COMPUTATIONAL GEOMETRY	Theory
Sem. III—Physics			Sem. III—Physics		
312A3	ASTRONOMY AND ASTROPHYSICS	Theory	612A3	ASTRONOMY AND ASTROPHYSICS	Theory
312B3	BIOPHYSICS I	Theory	612B3	BIOPHYSICS	Theory
312C3	COMMUNICATION ELECTRONICS I	Theory	612D4	ELECTRO-ASCOUSTIC & ENTERI ELETRONIC	Theory
312D3	ELECTRO-ASCOUSTICS & ENTERIN- ELECTRONICS	Theory	612D4	ELECTRO-ASCOUSTIC & ENTERI ELETRONIC	Theory
312E3	MEDICAL INSTRUMENTATION I	Theory	612J3	MEDICAL ELECTRONICS	Theory
312F3	MOTION PICTURE PHYSICS I	Theory	612F3	MOTION PICTURE PHYSICS	Theory
312G3	RENEWABLE ENERGY SOURCES I	Theory	612G4	RENEWABLE ENERGY SOURCES	Theory
312H3	BASIC MICROPROCESSOR & PROGRAMMING	Theory	612P4	MICROCONTROLLERS	Theory
312K3	AUXILIARY ELECTRONICS	Theory	612D4	ELECTRO-ASCOUSTIC & ENTERI ELETRONIC	Theory
312L3	ELEMENTS OF MATERIALS SCIENCES	Theory	612L3	ELEMENTS OF MATERIALS SCIENCES	Theory
312M3	LASERS	Theory	612L4	LASERS	Theory
312N3	VACUUM TECHNOLOGY	Theory	612L3	ELEMENTS OF MATERIALS SCIENCES	Theory
Sem. IV—Physics			Sem. IV—Physics		
312A4	ASTRONOMY AND ASTROPHYSICS II	Theory	612A3	ASTRONOMY AND ASTROPHYSICS	Theory
312B4	BIOPHYSICS II	Theory	612B3	BIOPHYSICS	Theory
312C4	COMMUNICATION ELECTRONICS II	Theory	612D4	ELECTRO-ASCOUSTIC & ENTERI ELETRONIC	Theory
312D4	ELECTRO-ASCOUSTIC & ENTERI ELETRONIC II	Theory	612D4	ELECTRO-ASCOUSTIC & ENTERI ELETRONIC	Theory
312E4	MEDICAL INSTRUMENTATION II	Theory	612J3	MEDICAL ELECTRONICS	Theory
312F4	MOTION PICTURE PHYSICS II	Theory	612F3	MOTION PICTURE PHYSICS	Theory
312G4	RENEWABLE ENERGY SOURCES II	Theory	612G4	RENEWABLE ENERGY SOURCES	Theory
312H4	BASIC MICROPROCESSOR & PROGRAMMING II	Theory	612P4	MICROCONTROLLERS	Theory
312K4	VACUUM TECHNOLOGY	Theory	612L3	ELEMENTS OF MATERIALS SCIENCES	Theory
312L4	LASERS	Theory	612L4	LASERS	Theory
312M4	AUXILIARY ELECTRONICS	Theory	612D4	ELECTRO-ASCOUSTIC & ENTERI ELETRONIC	Theory
312N4	ELEMENTS OF MATERIALS SCIENCES	Theory	612L3	ELEMENTS OF MATERIALS SCIENCES	Theory
Sem. III—Chemistry			Sem. III—Chemistry		
313A3	NUCLEAR CHEMISTRY	Theory	613A3	NUCLEAR CHEMISTRY	Theory
313B3	POLYMER CHEMISTRY	Theory	613B3	POLYMER CHEMISTRY	Theory
313C3	BIO-CHEMISTRY	Theory	613C3	BIO-CHEMISTRY	Theory
313D3	ENVIRONMENTAL CHEMISTRY	Theory	613D3	ENVIRONMENTAL CHEMISTRY	Theory
313E3	AGRICULTURE & DAIRY CHEMISTRY	Theory	613E3	AGRICULTURE & DAIRY CHEMISTRY	Theory
313F3	MEDICINAL CHEMISTRY	Theory	613C3	BIO-CHEMISTRY	Theory

T.Y.B.Sc. ELECTIVE PAPER-SUBJECT CODING LIST (2003 Pattern)
(2003 Pattern) for Office

(Elec. 2003 Pattern) for Student
Equivalence Subject Code (19)

Subject Code	Subject Name	Theory Practical	Subject Code	Subject Name	Theory Practical
Sem. IV—Chemistry			Sem. IV—Chemistry		
313A4	NUCLEAR CHEMISTRY	Theory	613A4	NUCLEAR CHEMISTRY	Theory
313B4	POLYMER CHEMISTRY	Theory	613B4	POLYMER CHEMISTRY	Theory
313C4	BIO-CHEMISTRY	Theory	613C4	BIO-CHEMISTRY	Theory
313D4	ENVIRONMENTAL CHEMISTRY	Theory	613D4	ENVIRONMENTAL CHEMISTRY	Theory
313E4	AGRICULTURE AND DAIRY CHEMISTRY	Theory	613E4	DAIRY CHEMISTRY	Theory
313F4	MEDICINAL CHEMISTRY	Theory	613C4	BIO-CHEMISTRY	Theory
Sem. IV—Botany			Sem. IV—Botany		
314A4	MUSHROOM TECHNOLOGY	Theory	61464	(BO-346) PHARMACOGNOSY	Theory
314B4	POLY-HOUSE TECHNOLOGY	Theory	61464	(BO-346) PHARMACOGNOSY	Theory
314C4	MEDICO BOTANY	Theory	61464	(BO-346) PHARMACOGNOSY	Theory
Sem. III—Statistics			Sem. III—Statistics		
317A3	OPERATIONS MANAGEMENT	Theory	617A3	OPERATIONS MANAGEMENT	Theory
317B3	ACTURIAL STATISTICS	Theory	617B3	ACTURIAL STATISTICS	Theory
317C3	STATISTICAL COMPUTING USING R SOFT.	Theory	617D3	TIME SERIES ANALYSIS	Theory
Sem. IV—Statistics			Sem. IV—Statistics		
317A4	C++ PROGRAMMING	Theory	317A4	C++ PROGRAMMING	Theory
317B4	SATISTICAL ECOLOGY	Theory	617B4	SATISTICAL ECOLOGY	Theory
317C4	TIME SERIES ANALYSIS	Theory	617D3	TIME SERIES ANALYSIS	Theory
Sem. III—Electronics			Sem. III—Electronics		
322A3	COMPUTER HARDWARE	Theory	622F3	FIBER OPTICS & FIBER OPTIC COMN.I	Theory
322B3	COMP.NETWORK DESIGN & MAINTENANCE	Theory	622F3	FIBER OPTICS & FIBER OPTIC COMMUNICATION.I	Theory
322C3	BIOMEDICAL INSTRUMENTATION I	Theory	622F3	FIBER OPTICS & FIBER OPTIC COMN.I	Theory
322D3	ELECTRONIC INSTRUMENTATION	Theory	622F3	FIBER OPTICS & FIBER OPTIC COMN.I	Theory
322E3	AGRI ELECTRONICS I	Theory	622F3	FIBER OPTICS & FIBER OPTIC COMN.I	Theory
322F3	FIBER OPTICS & FIBER OPTIC COMN.I	Theory	622F3	FIBER OPTICS & FIBER OPTIC COMN.I	Theory
Sem. IV—Electronics			Sem. IV—Electronics		
322A4	COMPUTER NETWORKING	Theory	62214	ADVANCED COMMUNICATION SYSTEMS	Theory
322B4	NETWORK OPERATING SYSTEMS	Theory	62214	ADVANCED COMMUNICATION SYSTEMS	Theory
322C4	BIOMEDICAL INSTRUMENTATION II	Theory	62214	ADVANCED COMMUNICATION SYSTEMS	Theory
322D4	MEDICAL INSTRUMENTATION	Theory	62214	ADVANCED COMMUNICATION SYSTEMS	Theory
322E4	AGRI ELECTRONICS II	Theory	62214	ADVANCED COMMUNICATION SYSTEMS	Theory
322F4	FIBER OPTICS & FIBER OPTIC COMMUNICA II	Theory	62214	ADVANCED COMMUNICATION SYSTEMS	Theory
Sem. III—Defence Studies			Sem. III—Defence Studies		
323A3	STRATEGIC THINKERS	Theory	623C3	INDIAN WAR SINCE INDEPENDENCE (I)	
323B3	INTERNATIONAL LAW	Theory	623J3	INTERNATIONAL LAW	
323C3	REFUGES STUDIES	Theory	623E3	DEFENCE JOURNALISM	
323F3	MARATHAART OF WAR & MILITARY SYSTEM	Theory	623B3	MARATHA MILITARY SYSTEM (I)	
323G3	INTERNATIONAL ORGANIZATION	Theory	623H3	INTERNATIONAL ORGANISATION AND NATIONAL SECURITY	
323H3	EVALUATION OF WESTERN ART OF WART	Theory	623L3	INTERNAL SECURITY OF INDIA (I)	
323M3	ARMED FORCES & SOCIETY	Theory	623G3	ARMED CONFLICT AND HUMAN RIGHTS	
323N3	GEOPOLITICS	Theory	623M3	INDIA'S MARITIME SECURITY (I)	
323T3	DEFENCE PRODUCTION IN INDIA	Theory	623F3	DEFENCE PREPAREDNESS OF INDIA (II)	
323U3	DEFENCE MANAGEMENT IN INDIA	Theory	623K3	MANAGEMENT OF DEFENCE PRODUCTION AND LOGISTICS IN INDIA	
Sem. IV—Defence Studies			Sem. IV—Defence Studies		
323A4	STRATEGIC THINKERS	Theory	623C4	INDIAN WAR SINCE INDEPENDENCE (II)	
323B4	INTERNATIONAL LAW	Theory	623J4	LAWS OF WAR AND PEACE	
323C4	REFUGES STUDIES	Theory	623G4	REFUGEES STUDIES	
323F4	MARATHAART OF WAR & MILITARY SYSTEM	Theory	623B4	MARATHA MILITARY SYSTEM (II)	
323G4	INTERNATIONAL ORGANIZATION	Theory	623H4	STUDY OF UNITED NATIONS	
323H4	EVALUATION OF WESTERN ART OF WAR	Theory	623D4	MILITARY PSYCHOLOGY	
323M4	ARMED FORCES & SOCIETY	Theory	623M4	INDIA'S MARITIME SECURITY (II)	
323N4	GEOPOLITICS	Theory	623F4	DEFENCE PREPAREDNESS OF INDIA (II)	
323T4	DEFENCE PRODUCTION IN INDIA	Theory	623K4	MANAGEMENT OF DEFENCE PRODUCTION AND LOGISTICS IN INDIA	
323U4	DEFENCE MANAGEMENT IN INDIA	Theory			