

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE
 Revised Structure of Syllabus for B.Sc. Geography to be Effective From
 F.Y.B.Sc. – June 2013
 S.Y.B.Sc. – June 2014
 T.Y.B.Sc. – June 2015

F.Y.B.Sc. June 2013	
Gg. 110	Geomorphology (Paper I)
Gg. 120	Climatology and Oceanography (Paper II)
Gg. 101	Techniques in Physical Geography (paper III)

S.Y.B.Sc. June 2014			
Course	Semester	Paper	Course Name
Gg 211	Sem I	Paper I	Geography of Resources – I
Gg 221	Sem II	Paper I	Geography of Resources – II
Gg 212	Sem I	Paper II	Watershed Management - I
Gg 222	Sem II	Paper II	Watershed Management - II
Gg 201	Annual	Paper III	Fundamentals of Geographical Analysis

T.Y.B.Sc. June 2015			
Course	Semester	Paper	Course Name
Gg-331	III	Paper I	Fundamentals of Human Geography (Part I)
Gg-341	IV	Paper II	Fundamentals of Human Geography (Part II)
Gg-332	III	Paper III	Geography of Travel and Tourism (Part I)
Gg-342	IV	Paper IV	Geography of Travel and Tourism (Part II)
Gg – 333	III	Paper V	Fundamentals of Geo-informatics (Part I)
Gg – 343	IV	Paper VI	Fundamentals of Geo-informatics (Part II)
Gg – 334	III	Paper VII	Geography of India (Part I)
Gg – 344	IV	Paper VIII	Geography of India (Part II)
Gg – 335	III	Paper IX	Geography of Soils (Part I)
Gg – 345	IV	Paper X	Geography of Soils (Part II)
Gg – 336	III	Paper XI	Fundamentals of Geo-informatics (Part I)
Gg – 346	IV	Paper XII	Fundamentals of Geo-informatics (Part II)
Gg – 347	Annual	Practical I	Map Analysis and Field Work
Gg – 348	Annual	Practical II	Techniques of Spatial Analysis
Gg -349	Annual	Practical III	Techniques in Geomorphology and Soil Analysis

Equivalence of Syllabus in Geography (F.Y.B.Sc.) Effective from June 2013

Old Syllabus June 2008		New Syllabus June 2013	
Gg. 110	Physical Geography (Paper I)	Gg. 110	Geomorphology (Paper I)
Gg. 120	Geography of Atmosphere and Hydrosphere (Paper II)	Gg. 120	Climatology and Oceanography (Paper II)
Gg. 101	Techniques in Physical Geography (Paper III)	Gg. 101	Techniques in Physical Geography (paper III)

Equivalence of S. Y. B. Sc. Geography Syllabus

S.Y.B.Sc.				
Course	Semester	Paper	Old Course 2009	New Course 2014
Gg 211	Sem I	Paper I	Fundamentals of Geography of Resources	Geography of Resources – I
Gg 221	Sem II	Paper I	Distribution, Development and Planning of Resources	Geography of Resources – II
Gg 212	Sem I	Paper II	Introduction to Hydrology	Watershed Management - I
Gg 222	Sem II	Paper II	Surface and Groundwater Hydrology	Watershed Management - II
Gg 201	Annual	Paper III	Map Projections & Surveying	Fundamentals of Geographical Analysis

Equivalence of T. Y. B. Sc. Geography Syllabus

T.Y.B.Sc.				
Course	Sem.	Paper	Old Course June 2010	New Course – June 2015
Gg-331	III	Paper I	Principles and Techniques of Watershed Management	Fundamentals of Human Geography (Part I)
Gg-341	IV	Paper II	Principles and Techniques of Watershed Management	Fundamentals of Human Geography (Part II)
Gg-332	III	Paper III	Geography of Travel and Tourism	Geography of Travel and Tourism (Part I)
Gg-342	IV	Paper IV	Geography of Travel and Tourism	Geography of Travel and Tourism (Part II)
Gg-333	III	Paper V	Fundamentals of Geo-informatics – Paper I	Fundamentals of Geo-informatics (Part I)
Gg- 343	IV	Paper VI	Fundamentals of Geo-informatics – Paper I	Fundamentals of Geo-informatics (Part II)
Gg -334	III	Paper VII	India : A Geographical Analysis	Geography of India (Part I)
Gg -344	IV	Paper VIII	India : A Geographical Analysis	Geography of India (Part II)
Gg- 335	III	Paper IX	Geography of Soils – Paper I	Geography of Soils (Part I)
Gg- 345	IV	Paper X	Geography of Soils – Paper II	Geography of Soils (Part II)
Gg- 336	III	Paper XI	Fundamentals of Geo-informatics - Part II	Fundamentals of Geo-informatics (Part I)
Gg-346	IV	Paper XII	Fundamentals of Geo-informatics - Part II	Fundamentals of Geo-informatics (Part II)
Gg- 347	Annual	Practical I	Map Analysis and Field Work	Map Analysis and Field Work
Gg-348	Annual	Practical II	Techniques of Spatial Analysis	Techniques of Spatial Analysis
Gg -349	Annual	Practical III	Techniques of Geomorphology	Techniques in Geomorphology and Soil Analysis

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 331: Fundamentals of Human Geography Part I**

(Semester III) From June 2015

1. Preamble of the Syllabus

- i. To acquaints the students with theoretical concepts of Human Geography and models.
- ii. To familiarize the students with Environmental issues related with population growth and Human development index

2. Introduction: Pattern -Semester (10 marks internal -40 Marks University per Semester)

3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

i. (Internal - Semester End and University exam),

ii. Pattern of question paper- 10-40

Internal Exam- 30 Marks = (converted in to 10 marks)

University Exam- 40 Marks

B. Standard of passing- Internal 04 and University 16 = Semester marks 20

C. ATKT rules- Yes

D. Eligible for Admission - S.Y.B.Sc. with Geography as one of the Subject

E. External students- Not Eligible

F. Setting of question papers / pattern of question paper

Internal Exam- 30 Marks = (converted in to 10 marks)

Question 1. Answers in 20 words- 20 marks (any 10 out of 13)

Question 2. Write short notes -10 marks (any 2out of 4)

University Exam- 40 Marks =

Question 1. Answers in two to three sentence each - 10 marks (any 10 out of 13)

Question 2. Write short Note -10 marks (any 2 out of 4)

Question 3. Answers in 100 words- 10 marks (any 2 out of 4)

Question 4. Answers in 200 words- 10 marks (any 1 out of 2)

G. Verification / Revaluation- Yes

5. Structure of the Course

a. Compulsory paper- T.Y.B.Sc. Special

b. Optional paper- No

c. Question paper and papers etc. - One

d. Medium of instructions- English

6. Equivalence of previous syllabus along with propose syllabus- Yes

7. University terms- Semester

8. Subject wise detail syllabus – As per attached sheets

9. Recommended books- Mentioned in Syllabus

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 341: Fundamentals of Human Geography Part II**

(Semester IV) From June 2015

1. Preamble of the Syllabus

- i. To acquaints the students with theoretical concepts of Human Geography and models.
- ii. To familiarize the students with Environmental issues related with population growth and Human development index

2. Introduction: Pattern –Semester (10 marks internal -40 marks University Per Semester)

3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

i. (Internal - Semester End and University exam),

ii. Pattern of question paper- **10-40**

Internal Exam- 30 Marks = (converted in to 10 marks)

University Exam- 40 Marks

B. Standard of passing- **Internal 04 and University 16 = Semester marks 20**

C. ATKT rules- **Yes**

D. . Eligible for Admission - **S.Y.B.Sc. with Geography as one of the Subject**

E. External students- **Not Eligible**

F. Setting of question papers / pattern of question paper

Internal Exam- 30 Marks = (converted in to 10 marks)

Question 1. Answers in 20 words- 20 marks (any 10 out of 13)

Question 2. Write short notes -10 marks (any 2 out of 4)

University Exam- 40 Marks =

Question 1. Answers in two to three sentence each - 10 marks (any 10 out of 13)

Question 2. Write short Note -10 marks (any 2 out of 4)

Question 3. Answers in 100 words- 10 marks (any 2 out of 4)

Question 4. Answers in 200 words- 10 marks (any 1 out of 2)

G. Verification / Revaluation- **Yes**

5. Structure of the Course

a. Compulsory paper- **T.Y.B.Sc. Special**

b. Optional paper- **No**

c. Question paper and papers etc. - **One**

d. Medium of instructions- **English**

6. Equivalence of previous syllabus along with propose syllabus- **Yes**

7. University terms- **Semester**

8. Subject wise detail syllabus – **As per attached sheets**

9. Recommended books- **Mentioned in Syllabus**

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 332: Geography Travel and Tourism Part I**
(Semester III) From June 2015

1. Preamble of the Syllabus

- i. To acquaint the students with Concepts in tourism.
- ii. To make the students aware of the tourism potential of the area.

2. Introduction: Pattern –**Semester (10 marks internal -40 marks University Per Semester)**

3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

- i. (Internal - Semester End and University exam),**
- ii. Pattern of question paper- 10-40**

Internal Exam- 30 Marks = (converted in to 10 marks)

University Exam- 40 Marks

- B. Standard of passing- Internal 04 and University 16 = Semester marks 20**
- C. ATKT rules- Yes**
- D. Eligible for Admission - S.Y.B.Sc. with Geography as one of the Subject**
- E. External students- Not Eligible**
- F. Setting of question papers / pattern of question paper**

Internal Exam- 30 Marks = (converted in to 10 marks)

- Question 1. Answers in 20 words- 20 marks (any 10 out of 13)
- Question 2. Write short notes -10 marks (any 2 out of 4)

University Exam- 40 Marks =

- Question 1. Answers in two to three sentence each - 10 marks (any 10 out of 13)
- Question 2. Write short Note -10 marks (any 2 out of 4)
- Question 3. Answers in 100 words- 10 marks (any 2 out of 4)
- Question 4. Answers in 200 words- 10 marks (any 1 out of 2)
- G. Verification / Revaluation- Yes**

5. Structure of the Course

- a. Compulsory paper- T.Y.B.Sc. Special**
- b. Optional paper- No**
- c. Question paper and papers etc. - One**
- d. Medium of instructions- English**

6. Equivalence of previous syllabus along with propose syllabus- Yes

7. University terms- Semester

8. Subject wise detail syllabus – As per attached sheets

9. Recommended books- Mentioned in Syllabus

Qualification of teacher- M.A./M.Sc.(Geography), as per UGC and University norms

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 342: Geography of Travel and Tourism Part II**
(Semester IV) From June 2015

1. Preamble of the Syllabus

- i. To acquaint the students with Concepts in tourism.
- ii. To make the students aware of the tourism potential of the area.

2. Introduction: Pattern –**Semester (10 marks internal -40 marks University Per Semester)**

3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

i. (Internal - Semester End and University exam),

ii. Pattern of question paper- 10-40 Marks

Internal Exam- 30 Marks = (converted in to 10 marks)

University Exam- 40 Marks

B. Standard of passing- Internal 04 and University 16 = Semester marks 20

C. ATKT rules- Yes

D. Eligible for Admission - S.Y.B.Sc. with Geography as one of the Subject

E. External students- Not Eligible

F. Setting of question papers / pattern of question paper

Internal Exam- 30 Marks = (converted in to 10 marks)

Question 1. Answers in 20 words- 20 marks (any 10 out of 13)

Question 2. Write short notes -10 marks (any 2 out of 4)

University Exam- 40 Marks =

Question 1. Answers in two to three sentence each - 10 marks (any 10 out of 13)

Question 2. Write short Note -10 marks (any 2 out of 4)

Question 3. Answers in 100 words- 10 marks (any 2 out of 4)

Question 4. Answers in 200 words- 10 marks (any 1 out of 2)

G. Verification / Revaluation- Yes

5. Structure of the Course

a. Compulsory paper- T.Y.B.Sc. Special

b. Optional paper- No

c. Question paper and papers etc. - One

d. Medium of instructions- English

6. Equivalence of previous syllabus along with propose syllabus- Yes

7. University terms- **Semester**

8. Subject wise detail syllabus – **As per attached sheets**

9. Recommended books- **Mentioned in Syllabus**

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 333: Fundamentals of Geo-informatics Part I**

(Semester III) From June 2015

1. Preamble of the Syllabus

- i. To acquaint the students with new concepts and approaches in Geography
- ii. To familiarize the students with the wide application fields in Geography

2. Introduction: Pattern – **Semester (10 marks internal -40 marks University Per Semester)**

3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

i. (Internal - Semester End and University exam),

ii. Pattern of question paper- 10-40

Internal Exam- 30 Marks = (converted in to 10 marks)

University Exam- 40 Marks

B. Standard of passing- Internal 04 and University 16 = Semester marks 20

C. ATKT rules- Yes

D. Eligible for Admission - S.Y.B.Sc. with Geography as one of the Subject

E. External students- Not Eligible

F. Setting of question papers / pattern of question paper

Internal Exam- 30 Marks = (converted in to 10 marks)

Question 1. Answers in 20 words- 20 marks (any 10 out of 13)

Question 2. Write short notes -10 marks (any 2 out of 4)

University Exam- 40 Marks =

Question 1. Answers in two to three sentence each - 10 marks (any 10 out of 13)

Question 2. Write short Note -10 marks (any 2 out of 4)

Question 3. Answers in 100 words- 10 marks (any 2 out of 4)

Question 4. Answers in 200 words- 10 marks (any 1 out of 2)

G. Verification / Revaluation- Yes

5. Structure of the Course

a. Compulsory paper- T.Y.B.Sc. Special

b. Optional paper- No

c. Question paper and papers etc. - One

d. Medium of instructions- English

6. Equivalence of previous syllabus along with propose syllabus- **Yes**

7. University terms- **Semester**

8. Subject wise detail syllabus – **As per attached sheets**

9. Recommended books- **Mentioned in Syllabus**

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 343: Fundamentals of Geo-informatics Part II**

(Semester IVIV) From June

2015

1. Preamble of the Syllabus

- i. To acquaint the students with new concepts and approaches in Geography
- ii. To familiarize the students with the wide application fields in Geography

2. Introduction: Pattern –**Semester (10 marks internal -40 marks University Per Semester)**

3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

i. (Internal - Semester End and University exam),

ii. Pattern of question paper- 10-40

Internal Exam- 30 Marks = (converted in to 10 marks)

B. Standard of passing- Internal 04 and University 16 = Semester marks 20

C. ATKT rules- Yes

D. Eligible for Admission - S.Y.B.Sc. with Geography as one of the Subject

E. External students- Not Eligible

F. Setting of question papers / pattern of question paper

Internal Exam- 30 Marks = (converted in to 10 marks)

Question 1. Answers in 20 words- 20 marks (any 10 out of 13)

Question 2. Write short notes -10 marks (any 2 out of 4)

University Exam- 40 Marks =

Question 1. Answers in two to three sentence each - 10 marks (any 10 out of 13)

Question 2. Write short Note -10 marks (any 2 out of 4)

Question 3. Answers in 100 words- 10 marks (any 2 out of 4)

Question 4. Answers in 200 words- 10 marks (any 1 out of 2)

G. Verification / Revaluation- Yes

5. Structure of the Course

a. Compulsory paper- T.Y.B.Sc. Special

b. Optional paper- No

c. Question paper and papers etc. - One

d. Medium of instructions- English

6. Equivalence of previous syllabus along with propose syllabus- Yes

7. University terms- Semester

8. Subject wise detail syllabus – As per attached sheets

9. Recommended books- Mentioned in Syllabus

Qualification of teacher- M.A./M.Sc.(Geography), as per UGC and University norms

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 334: Geography of India Part I**

(Semester III) From June 2015

1. Preamble of the Syllabus

- i. To acquaint the students with geography of India.
- ii. To make the student aware of the magnitude of problems and Prospects at National level. To help the students to understand the inter relationship between the subject and the society.
- iii. Introduction:

2. Introduction: Pattern –**Semester (10 marks internal -40 marks University Per Semester)**

3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

i. (Internal - Semester End and University exam),

ii. Pattern of question paper- 10-40 Marks

Internal Exam- 30 Marks = (converted in to 10 marks)

University Exam- 40 Marks

B. Standard of passing- **Internal 04 and University 16 = Semester marks 20**

C. ATKT rules- Yes

D. Eligible for Admission - **S.Y.B.Sc. with Geography as one of the Subject**

E. External students- Not Eligible

F. Setting of question papers / pattern of question paper

Internal Exam- 30 Marks = (converted in to 10 marks)

Question 1. Answers in 20 words- 20 marks (any 10 out of 13)

Question 2. Write short notes -10 marks (any 2 out of 4)

University Exam- 40 Marks =

Question 1. Answers in two to three sentence each - 10 marks (any 10 out of 13)

Question 2. Write short Note -10 marks (any 2 out of 4)

Question 3. Answers in 100 words- 10 marks (any 2 out of 4)

Question 4. Answers in 200 words- 10 marks (any 1 out of 2)

G. Verification / Revaluation- **Yes**

5. Structure of the Course

a. Compulsory paper- **T.Y.B.Sc. Special**

b. Optional paper- **No**

c. Question paper and papers etc. - **One**

d. Medium of instructions- **English**

6. Equivalence of previous syllabus along with propose syllabus- **Yes**

7. University terms- **Semester**

8. Subject wise detail syllabus – **As per attached sheets**

9. Recommended books- **Mentioned in Syllabus**

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 344: Geography of India Part II**

(Semester IV) From June 2015

1. Preamble of the Syllabus

- i. To acquaint the students with geography of India.
- ii. To make the student aware of the magnitude of problems and Prospects at National level.
- iii. To help the students to understand the inter relationship between the subject and the society.

2. Introduction: Pattern –**Semester (10 marks internal -40 marks University Per Semester)**

3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

i. **(Internal - Semester End and University exam),**

ii. **Pattern of question paper- 10-40 Marks**

Internal Exam- 30 Marks = (converted in to 10 marks)

University Exam- 40 Marks

B. Standard of passing- Internal 04 and University 16 = Semester marks 20

C. ATKT rules- Yes

D. Eligible for Admission - S.Y.B.Sc. with Geography as one of the Subject

E. External students- Not Eligible

F. Setting of question papers / pattern of question paper

Internal Exam- 30 Marks = (converted in to 10 marks)

Question 1. Answers in 20 words- 20 marks (any 10 out of 13)

Question 2. Write short notes -10 marks (any 2 out of 4)

University Exam- 40 Marks =

Question 1. Answers in two to three sentence each - 10 marks (any 10 out of 13)

Question 2. Write short Note -10 marks (any 2 out of 4)

Question 3. Answers in 100 words- 10 marks (any 2 out of 4)

Question 4. Answers in 200 words- 10 marks (any 1 out of 2)

G. Verification / Revaluation- Yes

5. Structure of the Course

a. Compulsory paper- **T.Y.B.Sc. Special**

b. Optional paper- **No**

c. Question paper and papers etc. - **One**

d. Medium of instructions- **English**

6. Equivalence of previous syllabus along with propose syllabus- **Yes**

7. University terms- **Semester**

8. Subject wise detail syllabus – **As per attached sheets**

9. Recommended books- **Mentioned in Syllabus**

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 335: Geography of Soil Part I**

(Semester III) From June 2015

1. Preamble of the Syllabus

- i. To acquaint the students with concepts in Soil Science.
- ii. To familiarize the students with the importance of soil science in Geography.

2. Introduction: Pattern –**Semester (10 marks internal -40 marks University Per Semester)**

3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

i. (Internal - Semester End and University exam),

ii. Pattern of question paper- 10-40 Marks

Internal Exam- 30 Marks = (converted in to 10 marks)

University Exam- 40 Marks

B. Standard of passing- Internal 04 and University 16 = Semester marks 20

C. ATKT rules- Yes

D. Eligible for Admission - S.Y.B.Sc. with Geography as one of the Subject

E. External students- Not Eligible

F. Setting of question papers / pattern of question paper

Internal Exam- 30 Marks = (converted in to 10 marks)

Question 1. Answers in 20 words- 20 marks (any 10 out of 13)

Question 2. Write short notes -10 marks (any 2 out of 4)

University Exam- 40 Marks

Question 1. Answers in two to three sentence each - 10 marks (any 10 out of 13)

Question 2. Write short Note -10 marks (any 2 out of 4)

Question 3. Answers in 100 words- 10 marks (any 2 out of 4)

Question 4. Answers in 200 words- 10 marks (any 1 out of 2)

G. Verification / Revaluation- Yes

5. Structure of the Course

a. Compulsory paper- T.Y.B.Sc. Special

b. Optional paper- No

c. Question paper and papers etc. - One

d. Medium of instructions- English

6. Equivalence of previous syllabus along with propose syllabus- **Yes**

7. University terms- **Semester**

8. Subject wise detail syllabus – **As per attached sheets**

9. Recommended books- **Mentioned in Syllabus**

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE
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Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 345: Geography of Soil Part II**

(Semester IV) From June 2015

1. Preamble of the Syllabus

- i. To acquaint the students with concepts in Soil Science.
- ii. To familiarize the students with the importance of soil science in Geography.

2. Introduction: Pattern –Semester (10 marks internal -40 marks University Per Semester)

3. Eligibility- S.Y.B.Sc Pass

4. Examination-

A. Pattern of examination

i. (Internal - Semester End and University exam),

ii. Pattern of question paper- 10-40 Marks

Internal Exam- 30 Marks = (converted in to 10 marks)

University Exam- 40 Marks

B. Standard of passing- Internal 04 and University 16 = Semester marks 20

C. ATKT rules- Yes

D. Eligible for Admission - S.Y.B.Sc. with Geography as one of the Subject

E. External students- Not Eligible

F. Setting of question papers / pattern of question paper

Internal Exam- 30 Marks = (converted in to 10 marks)

Question 1. Answers in 20 words- 20 marks (any 10 out of 13)

Question 2. Write short notes -10 marks (any 2 out of 4)

University Exam- 40 Marks =

Question 1. Answers in two to three sentence each - 10 marks (any 10 out of 13)

Question 2. Write short Note -10 marks (any 2 out of 4)

Question 3. Answers in 100 words- 10 marks (any 2 out of 4)

Question 4. Answers in 200 words- 10 marks (any 1 out of 2)

G. Verification / Revaluation- Yes

5. Structure of the Course

a. Compulsory paper- T.Y.B.Sc. Special

b. Optional paper- No

c. Question paper and papers etc. - One

d. Medium of instructions- English

6. Equivalence of previous syllabus along with propose syllabus- Yes

7. University terms- Semester

8. Subject wise detail syllabus – As per attached sheets

9. Recommended books- Mentioned in Syllabus

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 336: Fundamentals of Geoinformtics Part I**

(Semester III) From June 2015

1. Preamble of the Syllabus

- i. The objectives of this course are to acquaint the students with the nature of man-environment relationship and human capability to adopt and modify the environment under its varied conditions from primitive life style to the modern living.
- ii. To identify and understand environment and population in terms of their quality and spatial distribution pattern and to comprehend the contemporary issues facing the global community.

2. Introduction: Pattern –**Semester (10 marks internal -40 marks University Per Semester)**

3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

i. **(Internal - Semester End and University exam),**

ii. **Pattern of question paper- 10-40 Marks**

Internal Exam- 30 Marks = (converted in to 10 marks)

University Exam- 40 Marks

B. Standard of passing- **Internal 04 and University 16 = Semester marks 20**

C. ATKT rules- **Yes**

D. Eligible for Admission - **S.Y.B.Sc. with Geography as one of the Subject**

E. External students- **Not Eligible**

F. Setting of question papers / pattern of question paper

Internal Exam- 30 Marks = (converted in to 10 marks)

Question 1. Answers in 20 words- 20 marks (any 10 out of 13)

Question 2. Write short notes -10 marks (any 2 out of 4)

University Exam- 40 Marks

Question 1. Answers in two to three sentence each - 10 marks (any 10 out of 13)

Question 2. Write short Note -10 marks (any 2 out of 4)

Question 3. Answers in 100 words- 10 marks (any 2 out of 4)

Question 4. Answers in 200 words- 10 marks (any 1 out of 2)

G. Verification / Revaluation- **Yes**

5. Structure of the Course

a. Compulsory paper- **T.Y.B.Sc. Special**

b. Optional paper- **No**

c. Question paper and papers etc. - **One**

d. Medium of instructions- **English**

6. Equivalence of previous syllabus along with propose syllabus- **Yes**

7. University terms- **Semester**

8. Subject wise detail syllabus – **As per attached sheets**

9. Recommended books- **Mentioned in Syllabus**

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 346: Fundamentals of Geoinformtics Part I**

(Semester IV) From June 2015

1. Preamble of the Syllabus

i. To acquaint the students with new concepts and approaches in Geography

ii. To familiarize the students with the wide application fields in Geography

2. Introduction: Pattern – **Semester (10 marks internal -40 marks University Per Semester)**

3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

i. **(Internal - Semester End and University exam),**

ii. **Pattern of question paper- 10-40**

Internal Exam- 30 Marks = (converted in to 10 marks)

University Exam- 40 Marks

B. Standard of passing- **Internal 04 and University 16 = Semester marks 20**

C. ATKT rules- **Yes**

D. Eligible for Admission - **S.Y.B.Sc. with Geography as one of the Subject**

E. External students- **Not Eligible**

F. Setting of question papers / pattern of question paper

Internal Exam- 30 Marks = (converted in to 10 marks)

Question 1. Answers in 20 words- 20 marks (any 10 out of 13)

Question 2. Write short notes -10 marks (any 2 out of 4)

University Exam- 40 Marks

Question 1. Answers in two to three sentence each - 10 marks (any 10 out of 13)

Question 2. Write short Note -10 marks (any 2 out of 4)

Question 3. Answers in 100 words- 10 marks (any 2 out of 4)

Question 4. Answers in 200 words- 10 marks (any 1 out of 2)

G. Verification / Revaluation- **Yes**

5. Structure of the Course

a. Compulsory paper- **T.Y.B.Sc. Special**

b. Optional paper- **No**

c. Question paper and papers etc. - **One**

d. Medium of instructions- **English**

6. Equivalence of previous syllabus along with propose syllabus- **Yes**

7. University terms- **Semester**

8. Subject wise detail syllabus – **As per attached sheets**

9. Recommended books- **Mentioned in Syllabus**

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 347: Map Analysis and Field Excursion (Practical I)**
(Annual) From June 2015

1. Preamble of the Syllabus

- i. To acquaint the students with new concepts and approaches in Geography
 - ii. To familiarize the students with the wide application fields in Geography
2. Introduction: Pattern – **Internal – 20 marks (per semester 10 marks), External – 80 marks**
3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

i. Internal – semester end & University Exam

ii. Pattern of question paper- (20-80 marks)

B. Standard of passing- **Annual marks 40**

C. ATKT rules- **Yes**

D. Eligible for Admission - **S.Y.B.Sc. Geography as one of the subject**

E. External students- **No**

F. Setting of question papers / pattern of question paper- **As per Scheme of Marking**

University Exam- 100 Marks

G. Verification / Revaluation- **NO**

5. Structure of the Course

a. Compulsory paper- **T.Y.B.Sc. Special**

b. Optional paper- **No**

c. Question paper and papers etc. – **As per Batch (12 students per batch)**

d. Medium of instructions- **English**

6. Equivalence of previous syllabus along with propose syllabus- **Yes**

7. University terms- **Annual**

8. Subject wise detail syllabus – **As per attached sheets**

9. Recommended books- **Mentioned in Syllabus**

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 348: Techniques of Spatial Analysis (Practical II)**
(Annual) From June 2015

1. Preamble of the Syllabus

- i. To introduce some basic statistical procedures to the students to be applied to various themes
in geography
- ii To indicate the assumptions, limitations and interpretation of these procedures and results.
- iii. To train the students to handle these statistics towards analyzing the geographical problems.

2. Introduction: Pattern –**Annual (100 Marks University)**

3. Eligibility- **S.Y.B.Sc Pass**

4. Examination-

A. Pattern of examination

i. **University Annual Exam. 100 Marks**

ii. **Pattern of question paper- As per Skelton**

B. Standard of passing- **Annual Marks 40**

C. ATKT rules- **Yes**

D. Eligible for Admission - **S.Y.B.Sc. Geography as one of the Subject**

E. External students- **No**

F. Setting of question papers / pattern of question paper- **As per Scheme of Marking**

University Exam- 100 Marks

G. Verification / Revaluation- **NO**

5. Structure of the Course

a. Compulsory paper- **T.Y.B.Sc. Special**

b. Optional paper- **No**

c. Question paper and papers etc. – **As per Batch**

d. Medium of instructions- **English**

6. Equivalence of previous syllabus along with propose syllabus- **Yes**

7. University terms- **Annual**

8. Subject wise detail syllabus – **As per attached sheets**

9. Recommended books- **Mentioned in Syllabus**

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

SAVITRIBAI PHULE PUNE UNIVERSITY PUNE

Structure /Pattern of Syllabus- T.Y.B.Sc.

Title of the course – **Gg 349: Techniques of Geomorphology and Soil Analysis (Practical III)**

(Annual) From June 2015

1. Preamble of the Syllabus
 - i. To acquaint the students with various techniques in geomorphic analysis.
 - ii. To familiarize the students with the basic methods of soil analysis.
2. Introduction: Pattern –**Annual (100 Marks University)**
3. Eligibility- **S.Y.B.Sc Pass**
4. **Examination-**
 - A. Pattern of examination
 - i. University Annual Exam. 100 Marks**
 - ii. Pattern of question paper- As per Skelton**
 - B. Standard of passing- **Annual Marks 40**
 - C. ATKT rules- **Yes**
 - D. Eligible for Admission - **S.Y.B.Sc. Geography as one of the Subject**
 - E. External students- **No**
 - F. Setting of question papers / pattern of question paper- **As per Scheme of Marking University Exam- 100 Marks**
 - G. Verification / Revaluation- **NO**
5. Structure of the Course
 - a. Compulsory paper- **T.Y.B.Sc. Special**
 - b. Optional paper- **No**
 - c. Question paper and papers etc. – **As per Batch**
 - d. Medium of instructions- **English**
6. Equivalence of previous syllabus along with propose syllabus- **Yes**
7. University terms- **Annual**
8. Subject wise detail syllabus – **As per attached sheets**
9. Recommended books- **Mentioned in Syllabus**

Qualification of teacher- **M.A./M.Sc.(Geography), as per UGC and University norms**

Savitribai Phule Pune University, Pune
T.Y.B.Sc. Geography Syllabus
Gg: 331-Fundamentals of Human Geography (Part I)
June 2015

Objectives: - 1.To acquaints the students with theoretical concepts of Human Geography and models.
 2. To familiarize the students with Environmental issues related with population growth and Human development index

Topic	Sub topic	Learning Points	Periods
1. Introduction to Human Geography	Definition Nature and scope Approaches to the study	a) Meaning and Definition of Human Geography b) Nature and scope of Human Geography c) Approaches to the study of Human Geography: Traditional (Systematic, Regional, Historical, Environmentalistic, Possibilistic) Contemporary (Ecological, Spatial, Behavioural, Humanistic, Welfare) Determinism, Possibilism, Neodeterminism, Probabilism	9
2. Human Race	Evolution of man Human races Classification of human races and principal human races	a) Evolution of Man b) Concept of race, physical traits of races c) Classification of Human Races d) Principal Human Races of the World e) Grifith Taylor's Migration Zone Theory of Race Evolution	9
3. Study of various aspects of Population	Factors affecting density of population, World Distribution of Population Recent trends of Population Growth Migration: Human Development	a) Factors affecting density of population, World Distribution of Population, patterns of population density according to continents b) Recent trends of Population Growth: population growth in Continents, population growth in developed, developing and underdeveloped countries. c) Migration: Meaning, definition, causes, consequences, types and theories. d) Human Development: Concept, Human development Index (HDI), Hierarchy of countries, recent trends in HDI relations between economic growth and human development.	11
4. Population Polices and Environment Issues related to population	Population Polices	a) Population Polices of The United Nations b) Changing Polices in Developed and Under Developed World c) Population Polices of China and India d) Environmental refugees, Health and Sanitation, Nutrition	07
5. Culture : Diffusion and Realms	Cultural diffusion	a) Meaning of cultural diffusion, elements of cultural diffusion. b) Types of diffusion, Diffusion wave c) Hagerstrand model of diffusion d) Cultural realms : Meaning, classification , major cultural worldsand modern cultural realms of the worlds	09

References:

- 1 Human and Economic Geography: Goh Cheng Leong, Gillian C. Morgon, Oxford University Press.
2. Human Geography: H. Robinson . MacDonald and Evansltd, London.
3. Human Geography :Maurya S D PrayagPustakBhawan, Allahabad.
4. The Dictionary of Human Geography: Edited RJ Johnston. Blackwrll Reference.
5. Economic and Social Geography : R Knowles, J Wareing. Made simple series Rupa& Co New Delhi
6. Hussain, M. (1999): Human Geography, Rawat Publication, Jaipur

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Savitribai Phule Pune University, Pune
T.Y.B.Sc. Geography Syllabus
Gg: 341-Fundamentals of Human Geography (Part II)
June 2015

Topic	Sub topic	Learning Points	Period
1. Concepts of Rural and Urban settlement and Urbanization	Rural and Urban settlement and Urbanization	a) Concepts of Rural and Urban settlements b) The rural urban fringe, Umland, Conurbation. c) Urbanisation, indicators, determinants d) Origin and growth of Urbanisation, Urban patterns of the World, features of modern urbanization.	10
2. Theories and Models of Economic Activities	Theories and Models of Economic Activities Network analysis	a) VonThunenTheory b) Weber's Theory c) Flow theory and Network Analysis, d) Transport Nodes and Linkages e) Indices of Network analysis (Transport Network analysis), Lorenz Curve and Gini coefficient	08
3. Agricultural Geography	Agricultural types Globalization and agriculture Crisis of agriculture	a) Agricultural types: intensive, subsistence, extensive, commercial and plantation agriculture b) Globalization and agriculture, Changing pattern of Agriculture c) Crisis of agriculture. Aspects of food security and world patterns of hunger	11
4. Theories and Models of Population Geography	Theories: Composition of population	a) Theories: Malthusian, Demographic Transition Model b) Composition of population: Types of sex ratio c) Methods of age structure analysis d) Measurement of active population e) Occupation structure of population.	08
5. Geography of Trade	Factors affecting Trade World trade Organization and International trade.	a) Factors affecting Trade, Difference in natural resources b) Adam smith theory of trade c) Balance of payments, government policies and trading restrictions d) World trade Organization and International trade.	08

Reference Books:

- 1 Human and Economic Geography: Goh Cheng Leong, Gillian C. Morgon, Oxford University Press.
2. Human Geography: H. Robinson . MacDonald and Evansltd, London.
3. Human Geography: Maurya S D PrayagPustakBhawan, Allahabad.
4. The Dictionary of Human Geography: Edited RJ Johnston. Blackwrll Reference.
5. Economic and Social Geography : R Knowles, J Wareing. Made simple series Rupa& Co New Delhi
- 6.Hussain, M. (1999): Human Geography, Rawat Publication, Jaipur

Savitribai Phule Pune University, Pune
T.Y.B.Sc. Geography Syllabus
Gg 332: Geography of Travel & Tourism (Part I)
June 2015

Objectives: 1. To acquaint the students with Concepts in tourism.
 2. To make the students aware of the tourism potential of the area.

No.	Topic	Subtopic	Learning Points	Periods
1	Introduction Geographical Studies of Tourism	a. Definition b. Early Concepts c. Role of Geography in Tourism. d. Major components of Tourism.	(i) Tourism as a regional resource. (ii) Tourism as a multifaceted phenomena. (iii) Basic elements of tourism – dynamic, static, consequential elements. (i) Spatial patterns of supply. (ii) Spatial patterns of demand. (iii) The geography of resorts – seaside, resorts, winter & summer resorts. (iv) Tourist movements and flows. The impact of tourism.	12
2	Tourism Resources	a. Locational factors b. Attractions	(i) Geographic location – Absolute and relative location. (ii) Major attractions – Natural features, manmade objects and man and culture. (iii) Seasonality – effect of seasonality, temperature, wind speed, precipitation, visibility. (iv) Accessibility – physical assets. (v) Accessibility - with reference to travel time, cost and distance. (vi) Market accessibility. (vii) Concept of in	11
3	Factors affecting Tourism	a. Physical Factors b. Historical and Cultural Factors	(i) Natural features – Geography, Topography, Soils, Slope, Stability (ii) Relief features – Mountains, Lakes, Coasts, Water Falls, Hot Springs, Volcanic Islands. (iii) Climate – Temperature & rainfall, Sunny Days, Snow Free Days. (iv) Vegetation – National Parks, Sanctuaries (examples from India) (i) Growth of Historical Places. (ii) National Culture and heritage preservation. (iv) Cultural Diversity – Language, Social Customs, Tribal Cultures.	12
4	Tourists and Tourism	a. Basic of Classification	(i) Difference between Tourists and Tourism. (ii) Difference between Travel and Tourism. (iii) Tourism and Travel as basic needs of	10

		<p>b. Tourist Characteristics</p> <p>c. Purpose of Travel</p> <p>d. Institutional framework of tourism in India</p>	<p>man.</p> <p>(iv) Nationality – International and Domestic.</p> <p>(i) Socio-economic Characteristics.</p> <p>(ii) Visitor Density.</p> <p>(iii) Length of Stay.</p> <p>(iv) Types of Tourist activity.</p> <p>(v) Levels of Tourist Satisfaction.</p> <p>(i) Recreation, Culture, Health, Medical, Sports, Education and Business.</p> <p>Organization, policies, publicity, promotion problems</p>	
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Reference Books:

1. **P. Douglas** (1981) - "Tourist Development" – Longman, New York.
2. **A. P. Singh** (1989) – "Himalayan Environment and Tourism" – Chugh Publications, Allahabad.
3. **N. Kumar** (1996) – "Tourism and Economic Development" – APH Publishing Corporation, New Delhi.
4. **L. E. Hudman and R. H. Jackson** (1999) – "Geography of Travel and Tourism" – Delmar Publishers, New York.
5. **J. K. Sharma** (2000) – "Tourism Planning Development" – Kanishka Publishers, Distributors, New Delhi.
6. **Y. K. Sharma and P. Sharma** (2006) – "Handbook of Tourism" – Pointer Publishers, Jaipur.
7. **R. S. Suryawanshi:** Assessment of Potential For Eco-Tourism – Northern Thane District, Maharashtra, Lap Lambert Academic Publishing, Germany (2012)

Savitribai Phule Pune University, Pune
T.Y.B.Sc. Geography Syllabus
Gg 342: Geography of Travel & Tourism (Part II)

June 2015

- Objectives:** 1. To acquaint the students with Concepts in tourism.
2. To make the students aware of the tourism potential of the area.

No.	Topic	Subtopic	Learning Points	Periods
1	Types of Tourism	a. Classification b. Forms	(i) Historical and Cultural Tourism, Religious Tourism. (ii) Rural Tourism – Agro-tourism, Farm-tourism (iii) Concept of Second Homes. (iv) Geo-tourism. (v) Eco-tourism. (i) Caravan Tourism, Camping. (ii) Water Transport Tourism – Boating, Cruise, Ship Travel, Rivers, Canals, Yachting (iii) Sports Tourism. (iv) Adventure Tourism.	12
2	Tourism and Economic Activity	a. Role of Tourism in National Economy. b. Role of Transportation c. Role of Accommodation	(i) Employment Generation (ii) Foreign Exchange Earnings. (iii) Balance of Payments. (iv) Range of Services in Tourism Sector. (v) Regional Development – Sustainable Tourism Development. (i) Modes of Transport used by Tourists – Air, Rail, Road and Waterways. (ii) Factors influencing Choice of Transport. (iii) Transportation Costs. (iv) Incentives offered – Tour Packages. (i) Need for the different types of accommodations – Hotels, Dormitories, Youth Hostels, Cottages, Homes, Tents, House Boats, Yatri Bhavans, Dharamshalas	12
3	Impact of Tourism.	a. Economic Impact of Tourism b. Environmental Impact of	(i) Three types of expenditures – Direct, Indirect, and Induced. (ii) Types – a. Sales or Transaction Multipliers. b. Output Multipliers. c. Employment Multipliers. d. Income Multipliers. (iii) Methods of Deriving Tourism Multipliers. (iv) Increase in Land Values, Government Revenues and Trading Activity. (i) Impacts of Recreation on Wildlife. (ii) Pollution Emissions.	07

		Tourism c. Social and Cultural Impacts of Tourism.	(iii) Trampling of Vegetation and Soils. (iv) Destruction of Species. (i) Tourism and Cultural Change. (ii) Impacts on Religion, Language and Health. (iii) Impact on Local People Lifestyle. (iv) Deterioration of Traditional Arts (v) Effects of Foreign Elements on Indigenous Culture.	
4	Case Studies	a. Hill Stations b. Beach Resorts c. Temples and Caves d. Historical Places e. National Parks	(i) Darjeeling, Nainital. (ii) Ooty. (i) Kerala and Goa (i) Ajanta, Ellora, Hampi. (i) Agra, Bodhgaya. (i) Jim Corbett National Park, Kaziranga, Melghat.	08
5.	Recent development in tourism (ICT in tourism)	Modern means used in tourism	a. Tourist information system – Web portals, magazines, and bulletin. E-magazines b. Hands on tutorials- online booking Hospitality management c. Short report writing of 1500 words (not exceeding 10 pages) with reference to topic 4	06

Reference Books:

1. **P. Douglas** (1981) - "Tourist Development" – Longman, New York.
2. **A. P. Singh** (1989) – "Himalayan Environment and Tourism" – Chugh Publications, Allahabad.
3. **N. Kumar** (1996) – "Tourism and Economic Development" – APH Publishing Corporation, New Delhi.
4. **L. E. Hudman and R. H. Jackson** (1999) – "Geography of Travel and Tourism" – Delmar Publishers, New York.
5. **J. K. Sharma** (2000) – "Tourism Planning Development" – Kanishka Publishers, Distributors, New Delhi.
6. **Y. K. Sharma and P. Sharma** (2006) – "Handbook of Tourism" – Pointer Publishers, Jaipur.
7. **R. S. Suryawanshi:** Assessment of Potential For Eco-Tourism – Northern Thane District, Maharashtra, Lap Lambert Academic Publishing, Germany (2012)

Savitribai Phule Pune University, Pune
T.Y.B.Sc. Geography Syllabus
Gg: 333 Fundamentals of Geo-informatics – I
(Part I) June 2015

Objectives: 1. To acquaint the students with new concepts and approaches in Geography
2.To familiarize the students with the wide application fields in Geography

Topic	Sub topic	Learning Points	Period
1. Introduction to Geoinformatics	Definition of Geoinformatics and its importance and History of GIS	Definition of Geoinformatics Scope and Importance of Geoinformatics History of GIS, Components of GIS Functions of GIS, GIS tasks-Input, Manipulation, Management, Query analysis, Visualisation	9
2. Sources and types of GIS data	Sources and Types	Toposheets, Surveying, Aerial photographs, Satellite data and images Data types-Spatial and Non spatial	9
3. GIS data structures	Data models	Raster data and their characteristics Vector data and their characteristics	11
4 .GIS data bases and Data base management	Data analysis	Raster data analysis- grid cells or Pixels. Vector data analysis- Spatial data Generation in Vector Format Spatial and Non –Spatial data Management. Spatial information Technology	07
5. Remote sensing and GIS integration	Applications	Applications of GIS in Urban and Regional planning, Water resource management, Soil resource Management, Forestry and Environment	09

Reference Books:

1. **Kang-tsung Chang** (2003) Geographic Information Systems, Tata McGraw Hill, New Delhi
2. **Star J, and J. Estes**, (1994), Geographic Information Systems: An Introduction, Prentice Hall, New Jersey.
3. **Michael F. Goodchild and Karen K. Kemp** (1990) Introduction to GIS, National Center for Geographic Information and Analysis, University of California, Santa Barbara.
4. **Clarke, Keith C.** (1999) Getting Started with Geographic Information Systems, Prentice Hall, New Jersey,
5. **Lo Albert, C.P., and Young, K.W** (2003) Concepts and Techniques of Geographical Information Systems, Prentice Hall of India Pvt. Ltd., New Delhi.
6. **Williams J.** (1995): Geographic information from space, John Wiley and Sons, England,
7. **DeMers Michel N.**(2000): Geographic Information Systems, John Wiley and Sons.

Savitribai Phule Pune University, Pune
T.Y.B.Sc. Geography Syllabus

Gg. 343: Fundamentals of Geo-informatics –II
(Part II) June 2015

Topic	Sub topic	Learning Points	Period
1.Data input in GIS system	Digitization-Data transfer and key board entry	Various types of data-from scan map digital data and survey data-and attribute data	9
2.GIS data editing And attribute data linking	Relationship between entities attribute data linking	Topology building topological errors,Locational errors, edge matching Attribute data linking	9
3.Spatial and non spatial data analysis	Based on spatial and non spatial data	Query analysis-Spatial, Non spatial, Spatio-temporal, dissolve,Overlayanalysis,merge,buffer analysis, TIN Spatial analysis, Multicriteria analysis, Overlay analysis, Topographic analysis(DEM and DTM)	11
4.GPS	Global Positioning System	Types of GPS ,GPS accuracy and accuracy factors Global navigation satellites, Uses of GPS technology	07
5.Trends in GIS and GPS technology	GIS and GPS trends and technology	Review of GIS and GPS trends and technology and their applications in Decision Support system	09

Reference Books :

- 1.Sabins Floyd (1987): Remote sensing: Principals and applications. Freeman and Company, London
- 2.Curran P.J.(1995): Principles of Remote Sensing, John Wiley and Sons, England,
- 3.Lillesand T. & Kiefer R.W. (2000): Remote sensing and Image Interpretation. John Wiley and Sons.
- 4.Goodchild M.F. (1993): Environmental Modeling with GIS ,l Oxford University Press, London
5. Williams J. (1995): *Geographic information from space*, John Wiley and Sons, England,
- 6.DeMers Michel N. (2000): Geographic Information Systems, John Wiley and Sons
- 7.Chang Kang-tsung (2002): Introduction to Geographic Information Systems, Tata McGraw Hill, New Delhi

Savitribai Phule Pune University, Pune
T.Y.B.Sc Geography syllabus
Gg.: 334 Geography of India (Part I)
June 2015

Objectives :-

1. To acquaint the students with geography of India.
2. To make the student aware of the magnitude of problems and Prospects at National level.
3. To help the students to understand the inter relationship between the subject and the society.

Sr. No.	Topic	Sup Topic	Learning Points	Periods
1	Introduction	Location , Extent and Geopolitical Significance	1.Historical Background 2.Location and Extent 3.Relationship with Neighboring Countries 4.Geopolitical Importance of Indian Ocean.	10
2	Physiography	Major Physiographic Regions and their Importance	1. The Northern Mountains 2.The North Indian Plains 3.The Peninsular Plateau 4.The Costal low lands 5.The Islands	08
3	Drainage	Drainage System of India The Himalayan River System The Peninsular River System	1.The Indus , The Ganga , The Brahmaputra 2.East Flowing Rivers- Mahanadi, Godavari, Krishna, Kaveri. 3.West Flowing Rivers- Narmada, Tapi, Mahi 4.Rivers of the Sahyadri - Amba & Damanganga	10
4	Climate	Characteristics , Origin and Mechanism of Monsoon, Various Seasons	1. Role of Various Controlling Factors on Climate of India 2. Characteristics of Indian Climate- Various Seasons and Weather Associated with them 3. Monsoon: Origin and Mechanism	08
5	Soils and Natural Vegetation	Types and Distribution	Types of Soils and its Distribution Soil Degradation and Conservation Types of Natural Vegetation and its Distribution Deforestation and Conservation	09

References:

1. **Deshpande C.D:** India-A Regional Interpretation Northern Book Centre, New Delhi.1992.
2. **Farmer, B.H.:** An Introduction to South Asia. Methuen, London, 1983.
3. Govt. of India: India - Reference Annual, 2001 Pub. Div, New Delhi, 2001.
4. Govt. of India: National Atlas of India, NATMO Publication, Calcutta..
5. Govt. of India: The Gazetteer of India. Vol I & III Publication Division, New Delhi, 1965.
6. **Learmonth, A.T.A. et.al (ed.) :** Man and Land of South Asia Concept, New Delhi.
7. **Routray, J.K.:** Geography of Regional Disparity Asian Institute of Technology, Bangkok, 1993.
8. **Shafi, M:** Geography of South Asia, McMillan & Co., Calcutta, 2000.
9. **Singh, R.L.(ed.):** India: A Regional Geography. National Geographical Society. India, Varanasi, 1971.
10. **Spate, O.H.K. and Learmonth, A.T.A.;** India and Pakistan - Land, People and Economy Methuen & Co., London, 1967.
11. **P. G. Saptarshi, J. C. More, V. R. Ugale & A. H. Musmade :**A Geographical Region of India : Diamond Publication (2009) (Marathi)

Savitribai Phule Pune University, Pune
T.Y.B.Sc Geography syllabus
Gg. 344 Geography of India (Part II)
June 2015

Objective s: -

1. To acquaint the students with geography of India.
2. To make the student aware of the magnitude of problems and Prospects at National level.
3. To help the students to understand the inter relationship between the subject and the society.

Sr. No.	Topic	Sup Topic	Learning Points	Periods
1	Minerals and Energy Resources	a) Mineral Resources b) Energy Resources	1.Mineral Resources & its distribution Iron ore, Manganese, Bauxite, Copper 2.Energy Resources- a)Major Conventional & its Distribution Coal, Mineral Oil, Natural Gas b)Non-conventional - Hydroelectricity, Solar energy, Wind energy, Biogas, Atomic energy	10
2	Agriculture	Significance and Recent Trends in Agriculture	1. Significance of Agriculture in Indian Economy 2. Green Revolution 3.Livestock Resources, White Revolution & Blue Revolution 4.Tissue Culture & Horticulture 5. Polly House Agriculture 6. Dry Farming	08
3	Population	Growth, Distribution and Composition	Population- Growth, distribution and density Population composition Problems of overpopulation and its remedies	10
4	Planning and Development	Regional Planning and development	1.Concept, Objectives, Need, Nature of Regional Planning 2.Experience of Regional Planning in India 3.Regional Development of Maharashtra	08
5	Contemporary issues	Causes, effects and remedies	Water policies in India Natural harzards in India (Landslides, floods, droughts, cloud burst, hail storms) Suicide of farmers in India	09

References:

1. **Deshpande C.D:** India-A Regional Interpretation Northern Book Centre, New Delhi.1992.
2. **Farmer, B.H.:** An Introduction to South Asia. Methuen, London, 1983.
3. Govt. of India: India - Reference Annual, 2001 Pub. Div, New Delhi, 2001.
4. Govt. of India: National Atlas of India, NATMO Publication, Calcutta..
5. Govt. of India: The Gazetteer of India. Vol I & III Publication Division, New Delhi, 1965.
6. **Learmonth, A.T.A. et.al (ed.) :** Man and Land of South Asia Concept, New Delhi.
7. **Routray, J.K.:** Geography of Regional Disparity Asian Institute of Technology, Bangkok, 1993.
8. **Shafi, M:** Geography of South Asia, McMillan & Co., Calcutta, 2000.
9. **Singh, R.L.(ed.):** India: A Regional Geography. National Geoghical Society. India, Varanasi, 1971.
10. **Spate, O.H.K. and Learmonth, A.T.A.;** India and Pakistan - Land, People and Economy Methuen & Co., London, 1967.
11. **P. G. Saptarshi, J. C. More, V. R. Ugale & A. H. Musmade :**A Geographical Region of India : Diamond Publication (2009) (Marathi)

Savitribai Phule Pune University, Pune
T.Y.B.Sc. Geography Syllabus
Gg. 335: Geography of Soils (Part I)
June 2015

- Objectives:** 1. To acquaint the students with concepts in Soil Science.
 2. To familiarize the students with the importance of soil science in Geography.

No.	Topic	Sub topic	Learning Points	Periods
1	Introduction	Nature & Scope	Definition of Soil, Brief history of Soil Science/ Pedology, , Importance of soil studies in Geography.	04
2	Soil Formation And development of soil profile	Processes Mineral Composition Soil profile	a)Soil forming factors and processes, Components of soils b) Weathering and Pedogenesis Primary and secondary minerals, clay minerals, behaviour of clay minerals in tropics. Genetic structure of soil profile, Study of ideal soil profile –fundamental processes that affect profile differentiation-humification –illuviation-elluviation,calcification,podzolisation,laterisation,Gleiezation,salinization,alkalisation	10
3	Soil Physics	Basic Concepts	Soil texture - particle size analysis. and Soil structure, Effects of Soil Structure on other Physical Properties Porosity and bulk density, Soil moisture, Soil temperature, Soil color, Water holding capacity, Field capacity and wilting point.	11
4	Soil Chemistry	Chemical Processes	Soil Colloids - Types of Soil Colloids Oxidation-Reduction, Ion exchange, Hydrogen ion concentration, Redox potential, Cation- Anion exchange. Factors influencing ion exchange and its significance	10
5	Soil Classification	Types	Basis of classification, zonal, intrazonal and azonal soils, Classification of Tropical soils	10

Reference Books:

1. **Bunting:** Geography of Soils, Hutchinson, London
2. **Rode A. A. :** Soil science
3. **Briggs David. :** Soils, Butterworth, London
4. **Birkland P.** Weathering Pedology and Geo-morphological Research.

Savitribai Phule Pune University, Pune
T.Y.B.Sc. Geography Syllabus
Gg. 345: Geography of Soils (Part II)
June 2015

Sr.No.	Topic	Sub topic	Learning Points	Periods
1	Integral to Soil Formation	Four Processes	1) Additions [surface or subsurface] 2) Removals surface or subsurface 3) Transformations [chemical weathering] 4) Translocations [secondary clay minerals, base cations]	08
2	Soil organic matter:	Composition	Determination of Organic carbon and matter. Humus. fractionation of organic matter, carbon cycle C:N ratio Organic Colloids – Soil Organic Matter Factors Affecting Soil Organic Matter Decomposition of Soil Organic Matter	12
3	Soil reaction	Soil pH	Acidic, Alkaline, Neutral & soil pH alkalinity : Soil Acidity , Factors Controlling Soil Reactions Influence of Soil Reaction on Availability of Nutrients	10
4	Soil survey And classification	Soil survey and USDA Soil classification	Soil survey methods and USDA Soil classification Land Capability classification, Soils of India. Soils of Maharashtra.	08
5	Soil erosion And conservation		Soil erosion. types, universal soil loss equation & soil erosion control measures and soil conservation-Need of soil conservation and soil resource management in India	07

Reference Books:

1. **D.K. Das:** Introductory Soil Science
2. **J. A. Daji:** Text book of Soil Science.
3. **C. C. Shah and NK. Narayana** (1966): Physical properties of soil
4. **Henry. D. Fothk:** (1990) Fundamentals of Soil Science (8th edition)
5. **Biswas and Mukharjee** (1994): Text book of Soil Science (Second edition)
6. **N. C. Brady:** Nature and properties of soils (Tenth edition) prentice Hall of India Pvt. Ltd. New Delhi.
7. **V.D. Patil & C.V. Mali:** Fundamentals of Soil Science – A Text Book
8. Fundamentals of Soil Science by ISSS, New Delhi.

Savitribai Phule Pune University, Pune
T.Y.B.Sc. Geography Syllabus
Gg: 336 Fundamentals of Geoinformatics III
(Part I) June 2015

- Objectives:**
1. To acquaint the students with new concepts and approaches in Geography.
 2. To familiarize the students with the wide application fields in Geography.

Sr.No.	Topic	Sub topic	Learning Points	Periods
1.	Introduction to Remote sensing	History and Development	Historical development, Definition, A tool for resource surveys Applications	10
2.	Electromagnetic energy	Electromagnetic Radiation Electromagnetic Spectrum	Electromagnetic Radiation: Definition Properties of electromagnetic waves: velocity, wavelength, frequency. Atmospheric interactions, scattering, Reflection, emission, transmission. Division of spectrum in various spectral regions Imaging Systems: Normal color photos, IR color photos IR scanners	11
3.	Aerial Photography	Basic Concepts Geometry of Aerial Photographs	Aerial cameras, Types of photographs: vertical, oblique and terrestrial Aerial photographs as central perspective projection, Photo nadir, air base, flying height, Scales, swing and tilts	12
4.	Aerial Photographs	Types Annotation Strip, Stereoscopic View	Panchromatic(black and white), IR black & white, IR color photographs, Multispectral photographs. Fiducial marks, Principal and conjugate principal point, Altimeter reading, level bubble, Run No., Sortie no, Task No. Depth perception, Pseudoscopic image, Forward overlap, Sidelap, stereograms, stereopairs, stereoscopes: Pocket & Mirror.	12

Reference Books :

1. **Sabins Floyd**(1987): Remote sensing: Principals and applications. Freeman and Company, London
2. **Curran P.J** (1995): Principals of Remote Sensing, John Wiley and Sons, England,
3. **Lillesand T. & Kiefer R.W.** (2000): Remote sensing and Image Interpretation. John Wiley and Sons.

Savitribai Phule Pune University, Pune
T.Y.B.Sc. Geography Syllabus
Gg 346: Fundamentals of Geoinformatics– IV
(Part II) June 2015

Sr.No.	Topic	Sub topic	Learning Points	Periods
1.	Satellite Imaging	A) Types of Satellites by their orbital characteristics B) Sensors and platforms ,scanners	Geostationary and Sun Synchronous, Passive and active sensors ERTS, LANDSAT, SPOT, INSAT, IRS & IKONOS Satellite platforms, Optical mechanical scanners, Infrared scanners,	10
2.	Satellite Images Resolution	Types Types of Resolution of satellite images	Multispectral images, Thermal infrared Images, Radar images. Spatial ,Spectral ,Radiometric and temporal	12
3.	INSAT & IRS	Types	INSAT series, IRS series, Resolution and other properties.	08
4.	Image Interpretation		elements of interpretation, interpretation key	07
5.	DIP(Digital Image Processing)	Image Processing and Analysis	Pre processing ,Image enhancement, Image classification- Supervised and unsupervised- Spatial Feature Extraction	08

Reference Books:

1. **Sabins Floyd** (1987): Remote sensing: Principles and applications. Freeman and Company, London
2. **Curran P. J.** (1995): Principles of Remote Sensing, John Wiley and Sons, England,
3. **Lillesand T. & Kiefer R.W.** (2000): Remote sensing and Image Interpretation. John Wiley and Sons.

Online Learning

CCRS Canada Centre for Remote Sensing

http://landmap.mimas.ac.uk/ipc/ccrs/fundam_e.html

NASA Remote Sensing Tutorial

<http://rst.gsfc.nasa.gov/>

Savitribai Phule Pune University, Pune
T.Y.B.Sc. Geography Syllabus
Gg. 347: Map Analysis and Field Excursion (Practical- I)
June 2015

Objectives: 1. To acquaint the students with techniques of toposheet interpretation in Geography
2. To familiarize the students with field techniques and data collection in Geography

Workload – 04 periods per week of 12 students batch

Section I: Study and Interpretation of SOI Toposheets.

Sr No	Topic	Sub topic	Learning points	Periods
1.	SOI Toposheets	a. Representation	1) Qualitative and quantitative methods of relief representation: Hachures, hill shading, color and contour tints, Spot heights, bench marks, Trigonometric points, features Contours, Form lines 2) Methods of slope expression by contours: Even, uneven, concave, convex, gentle, steep and terraced 3) Representation of features by contours: Conical hill, plateau, ridge, spur, escarpment and waterfall, overhang, river valley, pass, saddle	05
		b. Introduction to Toposheets	1) Index to SOI sheets, , extent, contour interval on 1:1,000,000, 1:250,000, 1:50,000, 1:25,000 SOI sheets and their corresponding scales in British and Metric systems 2) Marginal information 3) Grid reference - international and six figure 4) Description and drawing of conventional signs and symbols.	10
		c. Profile drawing to assist Interpretation	1) Drawing and description of cross profile with a mention of vertical exaggeration. 2) Determination of intervisibility from the cross profiles. 3) Drawing and description of longitudinal profile of a river.	10
2.	Study of fluvial features produced by the work of river	landforms	Identification and interpretation of features of river erosion and deposition in upstream, and downstream sectors (Such as Gorge, 'V' shaped Valley, Waterfalls, knick points, meanders, oxbow lakes, terraces, flood plains, deltas etc.) for two toposheets on 1:50,000 or one inch scale.	08

3.	Study of Coastal Features Produced landforms by Creates by Sea Waves Tides etc. along with coast		Identification and interpretation of features of coast coastal erosion and deposition by sea waves (Such as Beaches and dunes, Bars, Spits, Cliffs, Shore platforms, shoreline terraces, Creeks, Estuaries, Swamps etc.) for two toposheets on 1:50,000 or one inch scale.	10
4.	Study of settlements	Characteristics of Settlements	Study and interpretation of settlements with reference to site and situation, types, functions, facilities, connectivity etc for two toposheets on 1:50,000 or one inch scale.	10

Section II : Project work and field excursion

Sr . No	Topic	Sub topic	Learning points	Periods
5.	Project work		Preparation of a set of maps and the description each map showing relief, soils, vegetation, Climate, settlements and landuse at village / tahuka level from Maharashtra OR Preparation of set of Maps and description of each map showing relief, soils, vegetation, climate, settlement, landuse at third order river basin with the help of spatial techniques or a regional issued based project OR Study of a tribe or an industry or a small town or a village	30
6.	Field excursion		One short tour of two days duration and preparation of tour report Or One long tour of more than five days duration and preparation of tour report	15

Note:

1. Use of map stencils, log tables, statistical tables and calculators is allowed at the time of examination.
2. Journal completion by the student and the certificate of completion by the practical in charge and the Head of the department is compulsory.
3. Candidate without a certified journal should not be allowed for the practical examination.

Reference Books:

1. Singh G. 1996, Map work and practical geography, Vikas publ. New Delhi
2. Singh R.L., 1979, Elements of practical Geography, Kalyani publ., New Delhi

Savitribai Phule, Pune University, Pune
T.Y.B.Sc
Gg – 348: Techniques of Spatial Analysis (Practical II)
Effective from-June-2015

- Objectives:** 1. To acquaint the students with various techniques in cartography.
 2. To familiarize the students with statistical analysis and its applications in Geography.

❖ **Work load – 04 Period per week of 12 student batch**

Section I: Cartographic Techniques

Unit No	Topic	Sub topic	Learning point	Periods
1	Introduction to coordinate system	Reference Systems	1. Geographical Co-ordinate, Coordinate systems. 2. Grid systems, Grid North, Magnetic North and true north 3. Bearing- magnetic and true	10
2	Scale	Meaning and types	1. Meaning, definition and types of map scales 2. Methods of scale representation – verbal, graphical and numerical, representative fraction(RF) 3. Conversion of scales (British to metric system)	10
3	Cartographic Interpretation	Signs and symbols	1. Signs and symbols used in quantitative, cartographic data representation, their merits and demerits 2. Point, line and area symbols 3. Proportional symbol	10
4	Drawing of maps	Quantitative maps	1. Isopleth, Choropleth maps, Dot maps, Flow diagram. (One map each manually and computerized)	10

Section II: Statistical Techniques

Unit .No	Topic	Sub topic	Learning point	Periods
5	Geographical data	Nature Scales of measurement	1. Spatial and Temporal 2. Discrete and Continuous data 3. Grouped and Ungrouped data 4. Nominal, ordinal, Interval and ratio scales	06
6	Statistical data	Frequency distribution	1. Tally marks and frequency table 2. Frequency histogram, polygon and curve 3. Cumulative frequency and Ogive curves	06
7	Central Tendency	Measures of central tendencies	1. Meaning and description of central tendencies.- Mean, Median, Mode 2. Calculation of Mean, Median, Mode for ungrouped and grouped data.(2 Examples)	08
8	Dispersion	Measures of dispersion	Mean deviation, absolute deviation, variance, Standard deviation and coefficient of variation.	08

9	Population and sample analysis	Population and samples	<ol style="list-style-type: none"> 1. Definition of population and sample. Meaning of unbiased random sample. 2. Methods of sampling: Random, Systematic and stratified 	06
		Introduction to hypothesis	<p>Meaning and definition of:</p> <ol style="list-style-type: none"> 1. Null and alternative hypothesis 2. Level of significance (Rejection level) 3. Degrees of freedom 4. Parametric and non-parametric tests 	04
10	Bivariate analysis	<p>Hypothesis testing</p> <p>Correlation and Regression</p>	<p>Application of following tests:</p> <ol style="list-style-type: none"> 1. Chi squared test (one way only) 2. Student's t test (comparison of sample means) 3. Concept of bivariate correlation and regression. 4. Meaning of coefficient of correlation. 5. Calculation of Pearson's product moment 6. Correlation coefficient (two examples) 7. Spearman's rank order correlation coefficient. (Two examples). 8. Calculation, plotting and interpretation of 9. Simple regression equation (two examples). 	12

Note:

1. Use of map stencils, log tables, statistical tables and calculators is allowed at the time of examination.
2. Journal completion by the student and the certificate of completion by the practical in charge and the Head of the department is compulsory.
3. Candidate without a certified journal should not be allowed for the practical examination.

Reference Books:

1. **Ebdon David**, 1989, Statistics for Geographers
2. **S. N. Karlekar and M. Kale** (2006) : Statistical analysis of geographical data, Diamond Publication, Pune
3. **King**, 1975, Statistical Geography
4. **Norcliffe G.B.** (1977). Inferential statistics for Geographers (Hutchinson, London)
5. **Rogerson P.A.** (2001). Statistical methods for Geography (SAGE pub., London, New Delhi)
6. **Shaw G. & Wheller D.** (1985). Statistical Techniques in Geographical Analysis, John Wiley & Sons, New York. approach to economic geography. Harper and Row, New York
7. **Singh G.** 1996, Map work and practical geography, Vikas publ. New Delhi
8. **Singh R.L.,** 1979, Elements of practical Geography, Kalyani publ., New Delhi

Section II: Soil Analysis

S. No.	Topic	Sub topic	Learning points	Periods
1	Concept of soil sampling	Methods	Various methods of soil sampling and at least one field sampling (by using soil augur or Core tubes)	05
2.	Study of physical properties of soils	Laboratory determination	Determination of i. Soil texture ii. Soil Moisture iii. Bulk density and Specific gravity iv. Percentage porosity	15
3.	Study of chemical properties of soils	Laboratory determination	Determination of i. Soil pH ii. Soluble salts by gravimetric method iii. Soil EC iv. CaCO_3 v. Organic carbon vi. Organic matter vii. N,P,K viii. Fe_2O_3 ix. Al_2O_3 x. SiO_2	20

Note:

1. Use of map stencils, log tables, statistical tables and calculators is allowed at the time of examination.
2. Journal completion by the student and the certificate of completion by the practical in charge and the Head of the department is compulsory.
3. Candidate without a certified journal should not be allowed for the practical examination.

Reference Books :

1. **Miller Austin**, 1979, Skin of the earth
2. **Wilkinson & Monkhouse** 1975, Maps & Diagrams
3. **King** 1994, Techniques in geomorphology
4. **Briggs**, 1979, Soils
5. **Piper**, 1975, Soil chemical analysis