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Accredited By NAAC
Revised Syllabus For
Bachelor of Science
Part – I
(Semester I & II)

GEOGRAPHY

(Subject to the modifications to be made from time to time)
Syllabus to be implemented from June 2013 Onwards.

Shivaji University, Kolhapur
Revised Syllabus for
Bachelor of Science Part – I
GEOGRAPHY

1. TITLE: Physical Geography

- 1) Paper – I (Semester – I) Introduction to Physical Geography
- 2) Paper-II (Semester – I) Geomorphology
- 3) Paper-III (Semester – II) Climatology
- 4) Paper –IV(Semester – II) Oceanography

Optional Subject under the Faculty of Science.

2. YEAR OF IMPLEMENTATION:

Revised Syllabus will be implemented from June, 2013 onwards.

3. PREAMBLE:

The Geography students of B. Sc. Part-I can betterly understand all latest concepts in Physical Geography in brief but in adequate manner.

4. GENERAL OBJECTIVES OF THE PAPER:

The objective of this course is to introduce the latest concepts in Physical Geography, Specifically in Geomorphology, Climatology and Oceanography.

5. DURATION:

- The course shall be a full time course.

6. PATTERN:

Pattern of Examination will be Semester for Theory.

7. ELIGIBILITY FOR ADMISSION:

As per eligibility criteria prescribed for each course and the merit list in qualifying examination.

8. MEDIUM OF INSTRUCTION:

The medium of instruction shall be in English.

9. STRUCTURE OF COURSE:

FIRST YEAR (No. of Papers- I, II, III & IV)

Sr. No.	Subject or Paper	Marks
1	Introduction to Physical Geography	50
2	Geomorphology	50
3	Climatology	50
4	Oceanography	50
Practical (Pattern of Examination will be ANNUAL .)		50

10. SCHEME OF TEACHING:

The scheme of teaching and examination should be given as applicable to the course / paper concerned.

Sr. No.	Subject or Paper	Teaching Scheme (Hrs./Week)			
		L	T	P	Total
1	Introduction to Physical Geography (Sem. I)	5	5	-	5
2	Geomorphology (Sem. I)				
3	Climatology (Sem. II)	5	5	-	5
4	Oceanography (Sem. II)				
Practical (Pattern of Examination will be ANNUAL .)		4	-	4	4

11. SCHEME OF EXAMINATION:

Question Paper will be set in the view of the / in accordance with the entire Syllabus and preferably covering each unit of syllabi of each semester.

12. STANDARD OF PASSING:

As per Prescribed rules and regulation for each degree / programme.

REVISED SYLLABUS FOR

B. Sc. Part – I GEOGRAPHY (Introduced from June, 2013 onwards)

(i) Paper – I (Semester - I)

(ii) Title of Paper : Introduction to Physical Geography

(iii) Marks : 50

Title of the Unit	No. of Periods
Unit – I) Introduction to Physical Geography	08
a) Definition of Physical Geography.	
b) Nature and Scope of Physical Geography.	
c) Branches of Physical Geography.	
d) Recent Trends in Physical Geography.	
Unit – II) The Earth	12
a) Structure of the Earth Interior.	
b) Theory of Isostasy	
i) Pratt's Theory of Isostasy.	
ii) Airy's Theory of Isostasy.	
c) Wegener's Continental Drift Theory.	
Unit – III) Forces of the Earth Crust	09
a) Endogenetic Forces	
i) Diastropic Forces :	
I) Epeirogenetic Forces.	
II) Orogenetic Forces.	
ii) Sudden Forces :	
I) Earthquakes (Causes, Effects and Distribution).	
II) Volcanoes (Causes, Effects and Distribution).	
Unit – IV) The Composition of the Earth's Crust	09
a) Rocks	
i) Classification of the Rocks.	
ii) Characteristics of the Rocks.	
iii) Importance of the Rocks.	
b) Soils	

- i) Factors of Soil Formation.
- ii) Major Types of Soils.
- iii) Soil Erosion and Methods of Soil Conservation.

Reference Books

- 1) Clyton K., (1986), Earth Crust, Adus Book , London.
- 2) Davis W. M., (1909), Geographical Essay, Ginnia Co.
- 3) Dayal P., (1996), Text Book of Geomorphology, Shukla Book Depot, Patna.
- 4) Kale V.S. and Gupta A., (2001), Elements of Geomorphology, Oxford University Press, Kolkata.
- 5) Kale V.S. and Gupta A., (2001), Elements of Geomorphology, Oxford Univ. Press. Monkhouse, (1951), Principle of Physical Geography, Mc Graw Hill Pub – New York.
- 6) Pitty A. F., (1974), Introduction to Geomorphology, Methuen London.
- 7) Singh Savindra, (2000), Physical Geography, Prayag Pustak Bhavan, 20-A, University Road, Allahabad – 211002.
- 8) Steers J. A., (1964), The Unstable Earth Some Recent Views in Geography, Kalyani Publishers, New Delhi.
- 9) Swaroop Shanti, (2006), Physical Geography, King Books, Nai Sarak, Delhi – 110006.
- 10) Wooldridge S. W. and Morgan R. S., (1959), The Physical Basis of Geography and Outline of Geomorphology, Longman Green and Co. London.

REVISED SYLLABUS FOR

B. Sc. Part – I GEOGRAPHY (Introduced from June, 2013 onwards)

(i) Paper – II (Semester - I)

(ii) Title of Paper : Geomorphology

(iii) Marks : 50

Title of the Unit	No. of Periods
Unit – I) Denudation	08
a) Weathering and Erosion.	
b) Weathering.	
i) Mechanical Weathering.	
ii) Chemical Weathering.	
iii) Biotic Weathering.	
Unit – II) Cycle of Erosion	12
a) Cycle of Erosion - W. M. Davis.	
b) Work of River (Erosion, Transportation & Deposition)	
c) Landforms Formed by a River.	
i) Youth Stage.	
ii) Mature Stage.	
iii) Old Stage.	
Unit – III) Work of Glacier and Wind	10
a) Work of Glacier (Erosion, Transportation & Deposition).	
i) Erosional Landforms of a Glacier.	
ii) Depositional Landforms of a Glacier.	
b) Work of Wind (Erosion, Transportation & Deposition).	
i) Erosional Landforms of a wind.	
ii) Depositional Landforms of a Wind.	
Unit – IV) Geomorphological Environment and Man.	08
a) Geomorphological Environment and Settlement.	
b) Geomorphological Environment and Transportation.	
c) Geomorphological Environment and Agriculture.	

Reference Books

1. Clyton K., (1986), Earth Crust, Adus Book , London.
2. Davis W. M., (1909), Geographical Essay, Ginnia Co.
3. Dayal P., (1996), Text Book of Geomorphology, Shukla Bool Depot, Patna.
4. Kale V. and Gupta A., (2001), Elements of Geomorphology, Oxford University Press, Kolkata.
5. Kale V.S. and Gupta, (2001), Elements of Geomorphology, Oxford Uni. Press.
6. Monkhouse, (1951), Principle of Physical Geography, Mc Graw Hill Pub – New York.
7. Pitty A. F., (1974), Introduction to Geomorphology, Methuen London.
8. Singh Savindra, (2000), Physical Geography, Prayag Pustak Bhawan, 20-A, University Road, Allahabad – 211002.
9. Small R. J., (1985), The Study of Landforms, Mc Graw Hill, New York.
10. Sparks B. W.,(1960), Geomorphology, Longman, London.
11. Steers J. A., (1964), The Unstable Earth Some Recent Views in Geography, Kalyani Publishers, New Delhi.
12. Swaroop Shanti, (2006), Physical Geography, King Books, Nai Sarak, Delhi – 110006.
13. Thornbury W. D., (1959), Principles of Geomorphology, Weley Estern.
14. Wooldridge S. W. and Morgan R. S., (1959), the Physical Basis of Geography an Outline of Geomorphology, Longman Green and Co. London.

REVISED SYLLABUS FOR

B. Sc. Part – I GEOGRAPHY (Introduced from June, 2013 onwards)

(i) Paper – III (Semester - II)

(ii) Title of Paper : Climatology

(iii) Marks : 50

Title of the Unit	No. of Periods
Unit – I) Atmosphere	08
a) Composition of Atmosphere.	
b) Structure of Atmosphere.	
c) Weather and Climate.	
Unit – II) Insolation and Temperature	12
a) Insolation	
i) Meaning and Definition of Insolation.	
ii) Factors Affecting the Distribution of Insolation.	
iii) Distribution of Insolation.	
iv) Heat Budget of the Earth.	
b) Temperature	
i) Distribution of Temperature – Vertical and Horizontal.	
ii) Factors Affecting the Distribution of Temperature	
iii) Range of Temperature.	
Unit – III) Atmospheric Pressure and Winds	08
a) Atmospheric Pressure	
i) Distribution of Atmospheric Pressure – Vertical and Horizontal.	
ii) Shifting of Pressure Belts and Their Effects.	
b) Winds	
i) Wind Directions and Related Laws.	
ii) Planetary Winds – Trade Winds, Antitrade winds and Polar Winds.	
Unit – IV) Humidity, Precipitation and Air Masses	10
a) Humidity	
i) Water Vapour and Evaporation.	
ii) Humidity and its Types.	
iii) Condensation and Associated Forms.	

- b) Precipitation
 - i) Forms of Precipitation.
 - ii) Origin of Rainfall.
 - iii) Types of Rainfall.
- c) Air Masses
 - i) Source of Region.
 - ii) Major Types of Air Masses.
 - iii) Air Masses of Asia.

Reference Books

1. Barry R. J. and Chorley, (1998), Atmosphere, Weather and Climate, Roufledge London and New York.
2. Chirtchfield J. H., (1933), General Climatology, Principal Hall, New Delhi, India.
3. Hussain M., Climatology and Oceanography.
4. Las D. S., (2002), Climatology, Chaitannya Publication.
5. Mather G. R., (1974), Climatology, Mc Graw Hill, New York.
6. Monkhouse, (1951), Principle of Physical Geography, Mc Graw Hill Pub – New York.
7. Singh Savindra, (2000), Physical Geography, Prayag Pustak Bhawan, 20-A, University Road, Allahabad – 211002.
8. Swaroop Shanti, (2006), Physical Geography, King Books, 1684, Nai Sarak, Delhi – 110006.
9. Thompson R. D. and Perry A., (1997), Applied Climatology – Principles and Practice, Routeledge, London.
10. Triwartha, (1980), An Introduction to Climate, Tata Mc. Gran Hill Pub, London.

REVISED SYLLABUS FOR

B. Sc. Part – I GEOGRAPHY (Introduced from June, 2013 onwards)

(i) Paper – IV (Semester - II)

(ii) Title of Paper : Oceanography

(iii) Marks : 50

Title of the Unit	No. of Periods
Unit – I) Oceanography	10
a) Man and Ocean.	
b) Surface Configuration of Ocean floors.	
Unit – II) Salinity and Temperature of Oceanic Water	10
a) Salinity	
i) Controlling Factors of Salinity.	
ii) Distribution of Salinity in Oceans and Seas.	
b) Temperature	
i) Controlling Factors of Temperature of Ocean Water.	
ii) Distribution of Temperature in Oceans and Seas.	
Unit – III) Circulation of Oceanic Water	09
a) Oceanic Waves.	
b) Oceanic Tides – High and Low.	
c) Ocean Currents – Major Ocean Currents.	
Unit – IV) Deposits and Coral Reefs	09
a) Ocean Deposits	
i) Shallow Sea Deposits.	
ii) Deep Sea Deposits.	
b) Types of Corals.	
c) Theories of Coral Formation.	

Reference Books

1. Davis Richard J. A., (1987), Oceanography – An Introduction to the Marine Environment, W. M. C., Brooth Flowa.
2. Garison T., (1998), Oceanography, Wardworth Company, U. S. A.
3. Gralds S., (1980), General Oceanography – An Introduction, Jon Waley and Sons, New York.
4. Sharma R.C. and Vatal Meera, Oceanography.
5. Strahler A. N., (1968), Physical Geography, Easten P. Ltd. New Delhi.
6. Singh Savindra, (2000), Physical Geography, Prayag Pustak Bhawan, 20-A, University Road, Allahabad – 211002.
7. Swaroop Shanti, (2006), Physical Geography, King Books, 1684, Nai Sarak, Delhi – 110006.

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Practical (50 Marks)

Title of Unit	No. of Periods	Marks
Unit – I) Scale of Map	24	10
<ul style="list-style-type: none"> i) Definition of Scale. ii) Methods of Expression of Scale. <ul style="list-style-type: none"> a) Plane Scale. b) Time and Distance Scale. c) Diagonal Scale. 		
Unit – II) Representation of Landforms by Contours	20	08
<ul style="list-style-type: none"> i) Types of Slopes. ii) Landforms by Contours - Hill, Plateau, Valley, Gorge, Cliffs, Waterfall. iii) Methods of Expression of Slopes - Gradient, Degree and Percentage. iv) Longitudinal Profile (Drawing and Intervisibility) 		
Unit – III) Remote Sensing	28	10
<ul style="list-style-type: none"> i) Concept of Remote Sensing. ii) Fundamentals of Remote Sensing: EMR, Sensors and Platforms. iii) Application of Remote Sensing in Geography. iv) Aerial Photography: Types of Aerial Photographs. v) Determination of Photo Scale. 		
Unit – IV) Cartographic Techniques	24	08
<ul style="list-style-type: none"> i) Representation of Climatic Data <ul style="list-style-type: none"> a) Line Graph and Bar Graphs. b) Wind Rose. c) Climograph. d) Hythergraph. 		

Unit – V) Introduction to GIS and GPS

20

10

- i) GIS (Geographic Information System).
 - a) Concept of GIS.
 - b) Elements of GIS.
 - c) Application of GIS in Geography.
- ii) GPS (Geographical Positioning System)
 - a) Introduction to GPS.
 - b) Application of GPS in Geography.
 - c) Field Work - Determining Latitude, Longitude and Altitude.

Journal and viva voce

04

Reference Books

1. Buoygoot, J. (1964), An Introduction to Mapwork and Practical Geography. University Tutorial, London.
2. Monkhouse, F. J. and Wilkinson, H. R. (1971), Maps and Diadgrams. Mathuen, London.
3. Raisz, E. (1962), Principals of Cartography, McGraw Hill Book Com., Inc, New York.
4. Robinson, A.H. and Shale, R. D. (1969), Elements of Cartography. John Wiley and Sons, Inc, New York.
5. Singh, L.R. and Singh, R., (1973), Mapwork and Practical Geography. Allahabad.
6. Curran, P. (1989), Principles of Remote Sensing, Logman, London.
7. Lo C. P. and Young A. K. W., (2011), Concepts and Techniques of Geographic Information Systems, PHI Learning Private Lim., New Delhi – 110001.
8. Dickinson, G.C., (1979), Maps and Air Photographs, Arnold Publisher, New Delhi.
9. Mishra, R.P and Ramesh A., (2000), Fundamentals of Cartography. Concept Publ. Com., New Delhi.
10. Burrough, P. A. and McDonell, R., (1998), Princinciples of Geographical Information Systems, Oxford University Press, Oxferd.

NOTE:

- i) The details of field work, seminar, Group Discussion and Oral examination be given wherever necessary.
- ii) General/Specific instructions for Laboratory safety should be given wherever necessary)