Estd. 1962
"A++" Accredited by NAAC(2021)
With CGPA 3.52

SHIVAJI UNIVERSITY, KOLHAPUR - 416004,
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शिवाजी विद्यापीठ, कोल्हापूर - ४१६००४,महाराष्ट्र
दूरध्वनी - ईपीएबीएक्स - २६०९०००, अभ्यासमंडळे विभाग दुरध्वनी विभाग २३१–२६०९०९३/९४

SU/BOS/Science/ 42 **Date: 17/ 10/ 2022**

To,
The Principal,
All Affiliated Concerned Science Colleges/Institutions
Shivaji University, Kolhapur.

Subject :- Regarding syllabi of M. Sc. & B.Sc. Part- I (NEP-2020) degree programme under the Faculty of Science and Technology as per National Education Policy 2020 .

Sir/Madam,

With reference to the subject mentioned above, I am directed to inform you that the university authorities have accepted and granted approval to the syllabi and Nature of question paper of **M. Sc. & B.Sc. Part- I Information Technology** under the Faculty of Science and Technology **as per National Education Policy 2020 .**

Sr. No.	Faculty of Science and Technology	Programme/ Course
1	**Geography & Geology**	M. A./M.Sc Part-I Geography,
		M.Sc. Part -I Geology,
		B.Sc. Part-I Geology,
		B.Sc Part-I Geography,

This syllabi and nature of question paper shall be implemented from the Academic Year **2022-2023** onwards. A soft copy containing the syllabus is attached herewith and it is also available on university website www.unishivaji.ac.in (students Online Syllabus)

You are, therefore, requested to bring this to the notice of all students and teachers concerned.

Thanking you,

Yours faithfully,

Dy Registrar

Copy to:

1	The Dean, Faculty of Science & Technology	7	Appointment Section
2	Director, Board of Examinations and Evaluation	8	P.G.Seminar Section
3	The Chairman, Respective Board of Studies	9	Computer Centre (I.T.)
4	B.Sc. Exam	10	Affiliation Section (U.G.)
5	Eligibility Section	11	Affiliation Section (P.G.)
6	O.E. I Section	12	P.G.Admission Section

SHIVAJI UNIVERSITY, KOLHAPUR

Accredited By NAAC with 'A++' Grade
CHOICE BASED CREDIT SYSTEM
Syllabus For

B. Sc. Part - I

GEOGRAPHY

(Syllabus to be implemented from June, 2022 onwards)

Shivaji University, Kolhapur

PROGRAM /COURSE STRUCTURE and SYLLABUS

as per the Choice Based Credit System (CBCS) designed in accordance with Learning Outcomes-Based Curriculum Framework (LOCF) of National Education Policy (NEP) 2020

B. Sc. Part-I Geography Degree (Basic/Honours)

w.e.f. Academic Year 2022-23 and onwards

1. TITLE: Physical Geography and Human Geography

1)	(Semester – I)	i) DSC 19 A - Physical Geography Paper-I
		ii) DSC 20 A - Physical Geography Paper-II
2)	(Semester – II)	i) DSC 20 B - Human Geography Paper-I
		ii) DSC 20 B - Human Geography Paper-II

Optional Subjects under the Faculty of Science.

2. YEAR OF IMPLEMENTATION:

Revised Syllabus will be implemented from June, 2021 onwards.

3. PREAMBLE:

The Geography students of B. Sc. Part-I can better understand all latest concepts in Physical Geography and Human 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 and Human Geography, Specifically in Atmosphere, Composition of the Earth, Fluvial Cycle, Hydrosphere, Human races, Population growth and distribution, Characteristics of Population and Settlements.

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 (Each of Papers- I & II)

Sr. No.	Subject or Paper	Marks
1	Physical Geography (Papers- I & II)	100
2	Human Geography (Papers- I & II)	100
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 (Credits / Week)			
		Credits	Theory	Practical	Total
1	Physical Geography	04	04	--	04
2	Human Geography	04	04	--	04
Practical (Pattern of Examination will be ANNUAL.)		02	--	02	02

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.

B. Sc. Part – I Semester I
(w.e.f. June, 2022)

DSC- 19 A: Geography (Physical Geography) - I

Marks: 50 Credits: 02

Title	No. of Lecture	Credits
Module I: Introduction to Physical Geography	**19**	**(1)**

1.1 Definition, Nature and Scope of Physical Geography

1.2 Branches of Physical Geography

1.3 Components of Earth systems

1.4 Importance of Physical Geography

1.5 Interior of the Earth: Structure of the Earth's interior, Density and Temperature in the interior of the Earth.

1.6 Forces of the Earth Crust: Endogenetic forces, Diastrophic forces: Epeirogenetic Forces, Orogenitic Forces

1.7 Wegener's Theory of Continental Drift.

1.8 Theory of Plate tectonics: Plates and boundaries and associated landforms

Module II	**Denudation**	**19**	**(1)**

2.1 Concept of Denudation

2.2 Weathering: Concept, Types of Weathering: Mechanical, chemical and Biotic Weathering

2.3 Fluvial Cycle of Erosion: W. M. Davis

2.4 Evolution of Landforms: Erosional and Depositional

2.4.1 Fluvial

2.4.2 Aeolian

Reference books:

1. Conserva H. T. 2004: Illustrated Dictionary of Physical Geography, Author House, USA.

2. Christopherson, R.W. 2000, Geo-systems, Prentice Hall, INC. USA. Hamblin, W.K., 1989: The Earth's Dynamic Systems, Macmillan Publishing Company, New York.

3. Gabler, R. E., Peterson,J. F. and Trapasso, L. M., 2007: Essentials of Physical Geography (8th Edition), Thomson, Brooks/ Cole, USA.

4. Garrette, N., 2000: Advance Geography, Oxford University Press.

5. Goudie, A., 1984: The Nature of Environment: An Advanced Physical Geography, Basil Blackwell Publishers, Oxford.

6. Husain, M., 2001: Fundamentals of Physical Geography, Rawat Publication, Jaipur.

7. Kale,V. S. and Gupta, A.,2001: Introduction to Geomorphology, Orient Longman, Calcutta.

8. Monkhouse, F. J., 1996: Principles of Physical Geography, Hodder and Stoughton, London.

9. Robinson, H., 1969: Morphology and Landscape, University Tutorial Press Ltd, London.

10. Siddhartha, K., 2001: The Earth's Dynamic Surface, Kisalaya Publications Pvt. Ltd, New Delhi.

11. Strahler, A.A. and Strahler, A. N., 2002: Physical Geography: Science and Systems of the Human Environment, John Wiley & Sons, New York.

B. Sc. Part – I Semester I
(w.e.f. June, 2022)

DSC- 19 A: Geography (Physical Geography) - II

Marks: 50 Credits: 02

Title	No. of Lecture	Credits
Module I: Introduction to Climatology	**19**	**1**

1.1 Definition and Scope

1.2 Composition and Structure of Atmosphere

1.3 Elements of Weather and Climate

1.4 Insolation: Insolation: Definition, solar constant, factors affecting on distribution of Insolation, Distribution of Insolation and Heat Balance of the Earth.

1.5 Temperature: Controlling Factors of Temperature, Distribution of Temperature: Vertical and Horizontal.

1.6 Atmospheric Pressure: Definition, Affecting Factors and Distribution of air pressure: Vertical and Horizontal, Pressure Belts, Shifting of Pressure Belts.

1.7 Winds: Planetary Winds

1.8 Climate Change: Concept, Natural and Human Causes of Climate Change

Module II: Oceanography	**18**	**1**

2.1 Definition

2.2 Surface Configuration of Ocean Floor

2.3 Temperature of Ocean Water: Factors Affecting on Horizontal Distribution of Temperature of Ocean Water, Vertical Distribution of Temperature Ocean Water

2.4 Salinity of Ocean Water: Affecting Factors on salinity of ocean water, Distribution of

salinity – Horizontal and Regional

2.5 Ocean Currents:

2.5.1 Factors affecting on ocean currents and Types of Ocean Currents

2.5.2 Ocean Currents: Pacific, Atlantic and Indian Ocean

2.6 Man and Ocean

Reference books:

1. Conserva H.T., 2004: Illustrated dictionary of Physical Geography, Author House, USA.
2. Critchfield, H.J., 1997: General Climatology, Prentice Hall of India Pvt. Ltd, New Delhi. Dasgupta, A. and Kapoor, A.N., Principles of Physical Geography. Grald, S., General Oceanography.
3. Gabler R.E., Petersen J.F. and Trapasso L.M., 2007: Essentials of Physical Geography (8^{th} edition), Thompson, Brooks/Cole, USA.
4. Garrett N. 2000: Advanced Geography, Oxford University Press.
5. Goudie A., 1984: The nature of the environment an advanced physical geography, Basil Blackwell Publishers, Oxford.
6. Hamblin W.K., 1995: Earth's Dynamic System, Prentice Hall, N J.
7. Husain M., 2002: Fundamentals of Physical Geography, Ravat Publication, Jaipur.
8. Lutgens, F.K. and Tarbuck, E.J., 2007: The Atmosphere, Pearson Prentice Hall, New Jersey. Pirie, R.G., Oceanography (Contemporary).
9. Monkhouse F.J. 200: Principals of Physical Geogeaphy, Platinum Publishers, Kolkatta.
10. Ross, D.A., 1988: Introduction to Oceanography. Prentice Hall, New Jersey.
11. Sharma, R.C. and Vatel. M., Oceanography for Geographers.
12. Strahler, A.A. and Strahler, A. N., 2002: Physical Geography: Science and Systems of the Human Environment, John Wiley and Sons, INC.
13. Strahler, A.H. and Strahler, A. N., 1992: Modern Physical Geography, John Wiley and Sons, INC.
14. Strahler, A.N., 1965: Introduction to Physical Geography, John Wiley and Sons,
15. Strahler A.N., Strahler A.H. 2008: Modern Physical Geography. John Wiley and Sons, New York.
16. Trewartha, G., Introduction to Weather and Climate. King, C.A.M., Oceanography for Geographers. Lake, P., Physical Geography.

B. Sc. Part – I Semester - II
(w.e.f. June, 2022)

DSC-19B: Geography (Human Geography) -I

Marks: 50 Credits: 02

Title of the Unit		No. of Lecture	No. of Credits
Module I	**Human Geography and Human Race**	**18**	**(1)**

1.1 Definition and Nature, Scope of Human Geography

1.2 Branches of Human Geography

1.3 Importance of Human Geography

1.4 Human Races: Classification and World Racial Groups

1.5 Human Life: ESKIMO (Cold) and PYGMY (Hot)

(Location, Geographical environment, Physical traits, Food & clothing and Economic activity)

Module II	**Population**	**19**	**(1)**

2.1 Population Growth: Concept and Population Growth in India

2.2 Factors Affecting on the Distribution of Population

2.3 Distribution of the World Population

2.4 Population Growth Theories: Malthusian Theory and Notestein's Theory of Demographic Transition

2.5 Demographic Transition in India

DSC-20B: Human Geography-II

Marks: 50 Credits: 02

Module I	**Composition of Population and Population Migration**	**19**	**(1)**

1.1 Age Composition: Factors Affecting on Age Composition and Age Composition in India.

1.2 Sex Ratio: Factors Affecting on Sex Composition and Sex Composition in India.

1.3 Migration: Concept, types and Causes

1.4 Consequences of Migration.

1.5 Population Policies of India and Population Projections

Module II	**Settlements**	**18**	**(1)**

2.1 Definition and Types of Settlements

2.2 Pattern of Rural Settlements

1.3 Functions of Rural Settlement

1.4 Urbanization

1.5 Classification of Urban Settlement

1.6 Functions of Urban Settlement

References:

1. Bergwan, Edward E 1995: Human Geography; Culture, Connections and Landscape, Prentice-Hall, New Jersey.
2. Carr, M. 1987: Patterns, Process and change in Human Geography. MacMillan Education, London.
3. Fellman, J. L. 1997: Human Geography—Landscapes of Human Activities. Brown and Benchman Pub., U.S.A.
4. De Blij H. J. 1996: Human Geography, Culture, Society and Space John Wiley, New York.
5. Johnston, R.J. (editor). 1994: Dictionary of Human Geography Blackwell, Oxford.
6. Mc Bride, P. J. 1996: Human Geography Systems, Patterns and Change, Nelson, U.K. and Canada.
7. Michael, Can 1997: New Patterns: Process and Change in Human Geography Nelson,
8. Rubenstein, J.H. and Bacon R.S. 1990: The Cultural Landscape — an Introduction to Human Geography. Prentice Hall, India, New Delhi.
9. Singh, K.N. 1992:People of India, An introduction Seagull Books.
10. Spate O.H.K. and Learmonth A. T. A. 1968: India and Pakistan Methuen, London.
11. U. V. Jagdale& P. G. Saptarshi (2007): Human Geography, Diamond Publication (Marathi)
12. Johnson R. Gregory D, Pratt G. et al. (2008) The Dictionary of Human Geography
13. Chandna, R.C. (2010) Population Geography, Kalyani Publisher.
14. Hassan, M.I. (2005) Population Geography, Rawat Publications, Jaipur
15. Johnston R; Gregory D, Pratt G. et al. (2008) The Dictionary of Human Geography, Blackwell Publication.
16. Jordan-Bychkov et al. (2006) The Human Mosaic: A Thematic Introduction to Cultural Geography. W. H. Freeman and Company, New York.
17. Kaushik, S.D. (2010) Manav Bhugol, Rastogi Publication, Meerut.
18. Maurya, S.D. (2012) Manav Bhugol, Sharda Pustak Bhawan. Allahabad.
19. Hussain, Majid (2012) Manav Bhugol. Rawat Publications, Jaipur
20. Beaujeu Gamier : Geography of Population, Longman, Lindon-1978
21. Clarke J.I. : Population Geography, Pergam on Press Oxford – 1972

22. Chandana R.C. : Geography of Population, Kalyani Pub. Ludhayana 1988
23. Hagget Petter : Human Geography
24. Ghosh B.N. : Fundamentals of Population Geography
25. Hussin M. : Human Geography 1994
26. Money D.S. : Human Geography
27. Perpillou A.V. : Human Geography, Longman, London- 1986
28. Robinson H. : Human Geography, 1976
29. Mishra &Puri : Indian Economy 2004
30. India- 2008 : Govt. of India
31. Hassan Mohammead I. : Population Geography, 2005
32. Bhende Asha & Kanitkar Tara : Principlas of Population studies
33. Perillouav : Human Geography, 1986
34. Singh, R.Y. : Geography of Settlement, 1998
35. Singh, Gopal : Mapwork & Practical Geography, 1999
36. Sawant S.B. & Athavale A.S. Population Geography, Mehta publishing house, Pune.

B. Sc. Part – I Practical-I (Based on paper I & II) (w.e.f. June, 2022)

Marks: 50 (Credits: 02)

General Cartography (Practical)

Title of the Unit		No. of Credits
Module I	**Map**	**(0.25)**

1.1 Map: Definition, Elements and Types

1.2 Maps and Globe – Similarities and Differences

1.3 Significance and uses of Maps and Globes

Module II	**Map Scale**	**(0.50)**

2.1 Meaning and Definition

2.2 Methods of Representation of scale

i) Verbal

ii) Numerical

iii) Graphical

2.3 Construction of Graphical Scale

i) Simple (Plane Scale)

ii) Time and Distance Scale

iii) Diagonal Scale

Module III	**Map Projection**	**(0.25)**

3.1 Definition and Classification of Map Projection

i) Based on the methods of Construction –
Perspective and Non-perspective

ii) Based on Developable Surface used -
Conical, Cylindrical, Zenithal, Conventional.

iii) Based on Position of Tangent Surfaces – Polar,
Equatorial (normal), and Oblique.

iv) Based on Position of view point or light –

Gnomonic, Stereographic, Orthographic

v) Based on Preserved qualities -

i) Equal area projection (Homolographic)

ii) Orthographic Projection

iii) Azimuthal Projection (True Bearing Projection)

3.2 Graphical Construction of the following Projections:

i) Zenithal Polar Gnomonic Projection

ii) Cylindrical Equal –Area Projection

iii) Simple Conical Projection with one standard Parallel

iv) Mercator's Projection

Module IV Representation of Statistical Data (0.50)

4.1 Graphs and Diagrams

i) One Dimensional Diagrams:

a) Climograph

b) Hythergraph

4.2 Two Dimensional Diagrams:

a) Divided Circle

b) Divided Rectangle

4.3 Three Dimensional Diagram:

a) Cube Diagram

b) Proportional Spheres

4.4 Distributional Maps

a) Choropleth Map

b) Isopleths Map

Module V Remote Sensing, GIS and GPS (0.50)

5.1 Remote Sensing

a) Definition and Concept of Remote Sensing

b) Elements of Remote Sensing: EMR, Sensors and Platforms.

c) Application of Remote Sensing in Geography

5.1 GIS (Geographical Information System)

a) Definition and Concept of GIS

b) Elements of GIS

c) Application of GIS in Geography

5.3 GPS / GNSS (Geographical Positioning System / Geographical Navigational Satellite System)

a) Definition and Concept of GPS / GNSS

b) Application of GPS in Geography

c) Field Work – Determining Latitude, Longitude and Altitude.

Reference Books

1. Buoygoot, J. (1964): An Introduction to Map work 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): Map work and Practical Geography. Allahabad.
6. Curran, P. (1989): Principles of Remote Sensing, Longman, 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): Principles of Geographical Information Systems, Oxford University Press, Oxford.

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.