

**North Maharashtra University, Jalgaon**

**NEW SYLLABI OF**

**S.Y.B.Sc.**

**GEOGRAPHY**

**W.E.F. JUNE, 2016**

# North Maharashtra University, Jalgaon

## S. Y. B. Sc. Semester – III

### **PAPER I: ENVIRONMENTAL GEOGRAPHY – I**

(With effect from June, 2016)

#### Objectives:

1. To create the environmental awareness amongst the students.
2. To acquaint the students with fundamental concepts of Environmental Geography.
3. To aware the students about the processes and patterns in the natural environment.
4. To acquaint the students with past, present and future utility and potentials of Environmental Geography at regional, national and global levels.
5. To make aware the students about the judicious use of resources.

Unit No.	Topic	Sub-topics	Periods
I	Introduction to Environmental Geography	A) Introduction to Environment a) Meaning and Concept b) Types of Environment: Natural(Physical) and Cultural B) Introduction to Environmental Geography a) Meaning and Concept b) Definitions c) Nature and Scope	10
II	Ecosystem	A) Meaning and Concept of Ecosystem B) Cardinal Principles of an Ecosystem a) Structure – Components i) Abiotic ii) Biotic b) Nutrient Cycling i) Carbon Cycle ii) Nitrogen Cycle c) Energy Flow i) Food Chain ii) Food Web C) Ecological Pyramids a) Population Pyramid b) Bio-mass Pyramid c) Energy Pyramid D) Types of Ecosystems a) Forest Ecosystem b) Desert Ecosystem c) Marine Ecosystem	20
III	Biodiversity	A) Definition B) Types of Biodiversity a) Genetic Diversity b) Species Diversity c) Ecosystem Diversity	15

		C) Biodiversity at Global, National and Local Levels D) Value of Biodiversity E) India as a Mega-diversity Nation F) Hot Spots of Biodiversity G) Threats to Biodiversity	
IV	Energy Resources	A) Concept and Definition B) Types of Energy Resources a) Conventional Energy Resources i) Coal – Types, Uses, Environmental Problems ii) Mineral Oil - Uses, Environmental Problems b) Non-conventional Energy Resources (with merits and demerits) i) Hydel ii) Wind iii) Solar	15
		<b>Total Periods</b>	<b>60</b>

#### Weightage of Marks

Unit No.	Marks
I	15
II	20
III	15
IV	10
Total Marks (University Level)	60
Internal Marks (College Level)	40

#### Reference Books:

- Ahirrao and Alizad (1999): *Environmental Science*, Nirali Publishing House, Pune
- Benny Josheph (2005): *Environmental Studies*, Tata McGraw-Hill Publishing Company, New Delhi.
- Cunningham W.P. and Cunningham M.A. (2003): *Principles of Environmental Science: Inquiry and Applications*, Tata McGraw Hill Publications, New Delhi.
- Miller, G.T. (2002): *Living in the Environment*, Books Cole Thomas Learning Inc. U.S.A.
- Misra S.P and Pandey S.N. (2014): *Essential Environmental Studies*, Ane Books Pvt. Ltd., New Delhi.
- Nagor, A.P. (1996): *Biological Diversity and International Environmental Law*, A.P.H Publication, New Delhi.
- Saxena, H.M.(2004): *Environmental Studies*, Rawat Publications, Jaipur.
- Sharma, P.D. (2004): *Ecology and Environment*, Rastogi Publications, Shivaji Road, Meerut.
- Singh, Savindra (2001): *Environmental Geography*, Prayag Pustak Bhavan, Alahabad-110002.

# North Maharashtra University, Jalgaon

## S. Y. B. Sc. Semester – III

### **PAPER II: PHYSICAL GEOGRAPHY OF INDIA**

(With effect from June, 2016)

#### **Objectives:**

1. To acquaint the students with basic knowledge of our country.
2. To aware the students about physiography, drainage, climate, soils and natural vegetation of India.
3. To aware the students with natural resources available in the country and need of conservation and protection of them.
4. To make the students ready for NET, SET and competitive examinations.

<b>Unit No.</b>	<b>Topic</b>	<b>Sub-topics</b>	<b>Periods</b>
I	Geographical Personality of India	A) India: Natural, Historical and Political Personality B) Location (Site and Situation), Extent and Geographical Area C) Adjacent Countries: Economic and Political Relationship. D) State- wise Geographical Area	10
II	Physiography and Drainage	A) Physiographic Divisions of India (Salient features of following divisions) a) Himalayan Mountainous Region b) Northern Plain Region c) Peninsular Plateau d) Coastal Plains e) Islands B) Drainage a) Himalayan Rivers b) Peninsular Rivers c) Ponds and Lakes	20
III	Climate	A) Factors Affecting on Climate of India B) Monsoon : a) Characteristics of Monsoon b) South West, Retreating and North East Monsoon C) Seasons – Summer, Rainy and Winter D) Distribution of Rainfall and Temperature E) Climatic Regions of India	15
IV	Soils and Natural Vegetation	A) Soils in India a) Major Soil Types – Distribution and Characteristics b) Problems of Soil Erosion and Soil Degradation c) Methods of Soil Conservation in India	15

		B) Natural Vegetation in India a) Major Types of Vegetation and their distribution b) Economic Importance of Forests c) Need of Conservation of Forests in India	
		<b>Total Periods</b>	<b>60</b>

### Weightage of Marks

Unit No.	Marks
I	15
II	20
III	15
IV	10
Total Marks (University Level)	60
Internal Marks (College Level)	40

### Reference Books:

- Das, P.K.: *Monsoon*.
- Deshpande, C.D.: *India: A Regional Interpretation*.
- Khatib, K.A. (2008): *Geography of India*, K'Sagar Publications, Pune.
- Majid Husain (2014): *Geography of India*, McGraw Hill Education (India) Private Education, New Delhi.
- Mamoria, C.B.: *Geography of India*
- Nag P. and S. Sengupta: *Geography of India*.
- Samudra, Archana (2008): *Geography of India*, K'Sagar Publications, Pune.
- Sharma and Quotinho: *Geography of India*
- Singh, Gopal (1979): *Geography of India*, Atmaram and Sons, Delhi.
- Singh, Jasbir: *Agricultural Atlas of India*.
- Singh R.L. (2008): *India - A Regional Geography of India*, National Geographical Society of India, Varanasi-5.
- Tirth, Ranjit(2002): *Geography of India*, Rawat Publications, Jaipur.
- Government of India: *India 2015*.

# North Maharashtra University, Jalgaon

## S. Y. B. Sc. Semester – III

### PAPER III: PRACTICAL GEOGRAPHY

#### Topographical Maps, Weather Instruments, Maps and Images

(Per Batch 12 Students and 4 periods per week)

(With effect from June, 2016)

#### Objectives:

1. To acquaint the students with basic knowledge and interpretation of Topographical Maps.
2. To acquire the knowledge of weather instruments.
3. To provide basic information about weather maps and weather images.
4. To acquaint the students about how to interpret weather maps and satellite images.

Unit No.	Topic	Sub-topics	Periods
I	Topographical Maps	A) Introduction to S.O.I. Toposheets B) Indexing of Toposheets C) Signs and Symbols D) Grid reference (Four & Six Figure) E) Methods of Representation of Relief and Elevations F) Representation of Relief features by Contours a) Slopes b) Landforms of Elevation c) Landforms of Depression G) Interpretation of Topographical Maps (any two) a) Plain Region b) Plateau Region c) Mountain Region	28
II	Weather Instruments	A) Mechanism, Function and Uses of following Instruments a) Minimum and Maximum Thermometer b) Thermograph c) Barograph d) Rain gauge e) Wind Vane f) Cup Anemometer	12
III	Daily Weather Maps and Satellite Images	A) Introduction to I.M.D. Weather Maps B) I.M.D. Weather Signs C) Isobaric Patterns a) Cyclone, b) Anticyclone, c) Trough/ V- Shaped Depression d) Secondary Depression, e) Wedge and f) Col	20

		D) Interpretation of I.M.D. Daily Weather Maps (Rainy, Winter & Summer Season) E) Interpretation of IMD Weather Images of Kalpana Satellite ( Rainy Season) a) Clouds: Kalpana 1 All Sectors of India (ASI) b) Winds: Low Level Winds (LLW) and High Level Winds (HLW)	
		<b>Total Periods</b>	<b>60</b>

### Weightage of Marks

Sr. No	Unit	Marks
I	Topographical Maps	25
II	Weather Instruments	10
III	Daily Weather Maps and Satellite Images	15
IV	Viva -voce	10
	Total Marks (University Level)	60
	Internal Marks (College Level)	40

### Reference Books:

- Monkhouse, F.X.J. & Wilkinson, H.R.(1971): *Maps & Diagrams*, London Methuen.
- Mishra, R.P and Ramesh A. (2000): *Fundamental of Cartography*, Concept Publishing Company, New Delhi.
- Robinson, A.H. & Sleep, R.D.(1969): *Elements of Practical Geography*.New York, John Wiley
- Singh Gopal (1996): *Map Work and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi.
- Singh, R.C. and Dutta (1993): *Elements of Practical Geography*, Kalyani Publications, New Delhi.
- Singh, Lekhraj & Singh Raghunandan (1973): *Map work and Practicl*, Central Book Deopt. Allahabad.
- Singh, R.L. and Singh, R.P.B. (1997): *Elements of Practical Geography*,Kalyani Publishers, New Delhi.
- Sing, R.L.& Kanaujia L.R.S.(1963): *Map Work and Practical Geography*, Allahabad Central Book Depot.
- IMD Weather web site- [www.imd.gov.in/section/satmet/dynamic/insat.htm](http://www.imd.gov.in/section/satmet/dynamic/insat.htm)

# North Maharashtra University, Jalgaon

## S. Y. B. Sc. Semester – IV

### PAPER I: ENVIRONMENTAL GEOGRAPHY – II

(With effect from June, 2016)

#### Objectives:

1. To acquaint the students with environmental problems.
2. To aware the students about the causes and effects of environmental pollution, global warming, ozone depletion, deforestation, etc.
3. To acquaint the students with environmental hazards and disaster management.
4. To acquire the knowledge of Conservation of Resources.
5. To aware the students about various Environmental Acts.

Unit No.	Topic	Sub-topics	Periods
I	Environmental Pollution	A) Definition of Pollution and Pollutants B) Types of Pollution (Causes, Effects and Remedial measures) a) Air Pollution b) Water Pollution c) Noise Pollution d) Solid Waste Pollution	22
II	Environmental Hazards and Disaster Management	A) Meaning, Concept and Types of Disasters B) Definition, Causes and Management (pre, during and post) of following Disasters a) Atmospheric: Cyclones b) Hydrological: Droughts and Floods c) Terrestrial: Earthquakes d) Biological: Weeds and Pests	10
III	Global Environmental Issues	A) Green House Effect B) Global Warming and Climate Change C) Depletion of Ozone Layer D) Deforestation E) Adverse Effects of Pesticides and Insecticides	12
IV	Conservation of Resources and Environmental Acts	A) Conservation of Resources (Meaning, Need and Methods) a) Soil Conservation b) Water Conservation c) Forest Conservation d) Wild Life Conservation B) Environmental Acts a) Air Pollution Act b) Wildlife Protection Act c) Water Pollution Act d) Forest Conservation Act	16
		<b>Total Periods</b>	<b>60</b>

### Weightage of Marks

Unit No.	Marks
I	20
II	10
III	15
IV	15
Total Marks (University Level)	60
Internal Marks (College Level)	40

### Reference Books:

- Benny Josheph (2005): *Environmental Studies*, Tata McGraw-Hill Publishing Company, New Delhi.
- Cunningham W.P. and Cunningham M.A. (2003): *Principles of Environmental Science: Inquiry and Applications*, Tata McGraw hill Publication, New Delhi
- Miller, G.T. (2002): *Living in the Environment*, Books Cole Thomas Learning Inc. U.S.A.
- Misra S.P and Pandey S.N. (2014): *Essential Environmental Studies*, Ane Books Pvt. Ltd., New Delhi.
- Nagor, A.P. (1996): *Biological Diversity and International Environmental Law*, A.P.H Publication, New Delhi.
- Saxena, H.M. (--): *Environmental Studies*, Rawat Publication, Jaipur.
- Sharma, P.D. (2004): *Ecology and Environment*, Rastogi Publications, Shivaji Road, Meerut.
- Singh, Savindra (2001): *Environmental Geography*, Prayag Pustak Bhavan, Alahabad-110002.
- Turk Jonathan and Turk Amos (1988): *Environmental Studies*, Saunders College Publication, USA.

# North Maharashtra University, Jalgaon

## S. Y. B. Sc. Semester – IV

### **PAPER II: ECONOMIC GEOGRAPHY OF INDIA**

(With effect from June, 2016)

#### **Objectives:**

1. To acquaint the students with basic knowledge of our country.
2. To acquaint the students with prospects and problems of agriculture, industries, trade and transport in India.
3. To aware the students with natural resources available in the country and need of conservation and protection.
4. To make the students ready for NET, SET and competitive examinations.

<b>Unit No.</b>	<b>Topic</b>	<b>Sub-topics</b>	<b>Periods</b>
I	Population	A) Population Distribution in India (As Per Census 2011) B) Factors Affecting on Distribution of Population in India (Physical & Cultural) C) Growth of Population in India D) Problems of Population in India E) Remedial Measures to solve Population Problems	12
II	Agriculture	A) Role of Agriculture in Indian Economy B) Types of Agriculture a) Shifting Agriculture b) Intensive Subsistence Agriculture c) Plantation Agriculture d) Horticulture C) Problems of Indian Agriculture D) Crops - Distribution in India a) Food Crops - Rice and Wheat b) Cash Crops - Cotton and Sugar cane	12
III	Resources	A) Distribution and Production of following Resources a) Mineral Resources i) Iron Ore ii) Bauxite b) Energy Resources i) Coal ii) Hydel Power iii) Wind Energy	12
IV	Industries	A) Iron and Steel Industries B) Cotton Textile Industries C) Sugar Industries D) Major Industrial Belts in India	12

V	Trade and Transport	A) Trade: Foreign Trade of India (Import and Export) B) Transport: a) Roads i) Express Highways ii) Asian Highways iii) Golden Quadrilateral b) Railways i) General Features ii) Divisions	12
		<b>Total Periods</b>	<b>60</b>

### Weightage of Marks

Unit No.	Marks
I	12
II	12
III	12
IV	12
V	12
Total Marks (University Level)	60
Internal Marks (College Level)	40

### Reference Books:

- Deshpande, C.D.: *India: A Regional Interpretation*.
- Khatib K.A.: *Geography of India*, K'Sagar Publication.
- Majid Husain(2014): *Geography of India*, McGraw Hill Education (India) Private Education, New Delhi.
- Mamoria, C.B.: *Geography of India*
- Nag P. and S. Sengupta: *Geography of India*.
- Sharma and Quotinho: *Geography of India*
- Singh, Gopal (1979): *Geography of India*, Atmaram and Sons, Delhi.
- Singh, Jasbir: *Agricultural Atlas of India*.
- Singh R.L. (2008): *A regional Geography of India*, National Geographical Society of India, Varanasi-5.
- Tirth, Ranjit(2002): *Geography of India*, Rawat Publications, Jaipur.
- Government of India: *Census of India, 2011*.
- Government of India: *India 2015*.

# North Maharashtra University, Jalgaon

## S. Y. B. Sc. Semester – IV

### **PAPER III: PRACTICAL GEOGRAPHY**

#### **Surveying, Leveling and Excursion/Village Survey Report**

*(Per Batch 12 Students and 4 periods per week)*

(With effect from June, 2016)

#### **Objectives:**

1. To acquaint the students with surveying.
2. To acquire the knowledge of leveling by different instruments.
3. To give informal education to students through excursions.
4. To aware the students about socio-economic conditions of villages.

<b>Unit No.</b>	<b>Topic</b>	<b>Sub-topics</b>	<b>Periods</b>
I	Surveying	A) Meaning and Definition of Surveying B) Types of Survey – Plane and Geodetic C) Plane Table Survey a. Open Traverse Method b. Close Traverse Method D) Measurement of Plots, Play Ground, Agricultural Land with the help of Plane Table Survey E) Preparation of Layout as per Govt. Record	30
II	Leveling	A) Definition of Leveling B) Introduction to Dumpy Level, Indian Clinometer and Abney Level C) Determination of height / Slope with the help of a) Dumpy Level with examples i) Collimation Method ii) Rise and Fall Method b) Indian Clinometer with examples c) Abney Level with examples	20
III	Excursion or Village Survey	A) Excursion Report on Places of Geographical Interests OR Village Survey Report (Socio-economic Survey)	10
		<b>Total Periods</b>	<b>60</b>

### Weightage of Marks

Sr. No	Unit	Marks
I	Surveying	20
II	Leveling	20
III	Excursion or Village Survey	10
IV	Viva -voce	10
	Total Marks (University Level)	60
	Internal Marks (College Level)	40

### Reference Books:

- Kanetkar T.P. and Kulkarni S.V. (1983), *Surveying and Levelling (Part I and II)*, Pune Vidyarthi Gruha Prakashan, Pune - 2
- Monkhouse, F.X.J. & Wilkinson, H.R.(1989): *Maps & Diagrams*, B.I Publications, Bombay.
- Mishra, R.P and Ramesh A. (2000): *Fundamental of Cartography*, Concept Publishing Company, New Delhi.
- Robinson, A.H. & Sleep, R.D.(1969): *Elements of Practical Geography*, New York, John Wiley
- Singh Gopal (1996): *Map Work and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi.
- Singh, R.C. and Dutta (1993): *Elements of Practical Geography*, Kalyani Publications, New Delhi.
- Singh, Lekhraj & Singh Raghunandan (1973): *Map work and Practical*, Central Book Deopt. Allahabad.
- Singh, R.L. and Singh, R.P.B. (1997): *Elements of Practical Geography*, Kalyani Publishers, New Delhi.
- Sing, R.L. and Kanaujia L.R.S.(1963): *Map Work and Practical Geography*, Allahabad Central Book Depot.