**DEPART NAME : GEOGRAPHY ( MORNING)** 

NAME OF FACULTY: ALOKA MUKHOPADHYAY

PAPER NAME & CODE: HUMAN GEOGRAPHY & GEOG - MD-CC02-2-TH

	Planned				
			After Impleme	ntation	
Unit/Group/ Module/Article	Topics	Reference Books	No. of Lecture Planned	Content Delivery Technique	Remarks/ Comments
Unit I	SCOPE & APPROACHES	Introduction to Human Geography by Dorrel, D.Henderson	10	CHALK & TALK PPT PRESENTATION PRESENTATION WITH TEACHING AIDS	
Unit II	SOCIAL GEOGRAPHY	Key Methods in Geography by Clifford, N, Cope	14		
Unit III	POPULATION GEOGRAPHY	Geography of Population by R.C.Chandna	7		
Unit IV	SETTLEMENT GEOGRAPHY	An introduction to settlement Geography by S.Gosh	10		
Unit V	URBAN GEOGRAPHY	An introduction to settlement Geography by S.Gosh	4		

**DEPART NAME : GEOGRAPHY ( MORNING)** 

NAME OF FACULTY: ALOKA MUKHOPADHYAY

PAPER NAME & CODE: HUMAN GEOGRAPHY LAB & GEOG - MD-CC02-2 -P

	Planned					
				After Implementation		
Unit/Group/	Topics	Reference Books	No. of	Content Delivery	Remarks/	
Module/Article			Lecture	Technique	Comments	
			Planned			
1	Growth rate of	Practical	6	CHALK & TALK		
	population	Geography by A.		PPT PRESENTATION		
		Sarkar		PRESENTATION WITH		
				TEACHING AIDS		
		Elements of				
II	Representation &	Practical	8	TOPOGRAPHICAL MAPS		
	Interpretation of	Geography by				
	population density	Singh, R.L. Singh				
III	Identification of		8	CENSUS OF DIFFERENT		
	types of settlements	Maps & Diagrams		DISTRICTS		
	according to sites	by F.J.				
	from Survey of India	Monkhouse				
	1: 50K topographical					
	maps					
IV	Construction of		8			
	proportional squares					

**DEPART NAME: GEOGRAPHY (MORNING)** 

NAME OF FACULTY: ALOKA MUKHOPADHYAY

PAPER NAME & CODE: METHODS IN GEOGRAPHY & GEOG-H-SEC01-2 TH

Planned			After Implementation		
Unit/Group/ Module/Article	Topics	Reference Books	No. of Lecture Planned	Content Delivery Technique	Remarks/ Comments
Unit I	FIELD DATA COLLECTION & COMPILATION	Geography of Fieldwork and Skills by Lenon B ,Cleves, P	24	CHALK & TALK PPT PRESENTATION PRESENTATION WITH TEACHING AIDS	
Unit II	METHODS IN PHYSICAL GEOGRAPHY	Key Methods in Geography by Clifford, N, Cope	18		
Unit III	METHODS IN HUMAN GEOGRAPHY	Fieldwork for Human Geography by Phillips, R, John J	18		

**DEPART NAME : GEOGRAPHY ( MORNING)** 

NAME OF FACULTY: ALOKA MUKHOPADHYAY

PAPER NAME & CODE: GEOMATICS & SPATIAL ANALYSIS & GEOG-IDC01-TH

Planned				
			After Implementation	
Topics	Reference Books	No. of	Content Delivery	Remarks/
		Lecture	Technique	Comments
		Planned		
CARTOGRAPHY	Fundamentals of	14	CHALK & TALK	
	Cartography by		PPT PRESENTATION	
	R.P. MISHRA		PRESENTATION WITH	
	Maps & Diagrams		TEACHING AIDS	
	by Monkhouse			
SURVEYING	Practical	12		
	Geography: A			
	Systematic			
	Approach by			
	Sarkar, A			
REMOTE SENSING	Fundamentals of	18		
AND	Remote Sensing			
GEOGRAPHICAL	by Joseph, G,			
INFORMATION	Jagannathan			
SYSTEM				

**DEPART NAME : GEOGRAPHY ( MORNING)** 

NAME OF FACULTY: ALOKA MUKHOPADHYAY

PAPER NAME & CODE: GEOMATICS & SPATIAL ANALYSIS LAB & GEOG-IDC02-P

Planned				
			After Implementation	
Topics	Reference Books	No. of	Content Delivery	Remarks/
		Lecture	Technique	Comments
		Planned		
CONSTRUCTION OF	Fundamentals of	5	CHALK & TALK	
SIMPLE CONICAL	Cartography by		PPT PRESENTATION	
PROJECTION WITH	R.P. MISHRA		PRESENTATION WITH	
ONE STD. PARALLEL			TEACHING AIDS	
TRAVERSE SURVEY	Maps & Diagrams	10		
USING PRISMATIC	by Monkhouse		SATELLITE IMAGERY	
COMPASS				
IDENTIFICATION OF	Practical	7		
LAND USE / LAND	Geography: A			
COVER FEATURES	Systematic			
FROM STANDARD	Approach by			
FCC &	Sarkar, A			
PREPARATION OF				
INVENTORIES	Fundamentals of			
CHAN & IMAGESGE	Remote Sensing	8		
DETECTION OF	by Joseph, G,			
RIVERBANK OR	Jagannathan			
COASTLINE SHIFT				
FROM MULTI-				
DATED MAPS				

**DEPART NAME: GEOGRAPHY (MORNING)** 

NAME OF FACULTY: ALOKA MUKHOPADHYAY

PAPER NAME & CODE: POPULATION GEOGRAPHY & GEO-G-DSE-B-6 04-TH

Planned			After Implementation		
Unit/Group/ Module/Article	Topics	Reference Books	No. of Lecture Planned	Content Delivery Technique	Remarks/ Comments
Unit I	POPULATION DYNAMICS	Population Geography by Hassan M.I.	20	CHALK & TALK PPT PRESENTATION PRESENTATION WITH TEACHING AIDS	
Unit II	POPULATION & DEVELOPMENT	Human Geography by Hussain .M. & Geography of Population by Chandna, R.C.	40		

**DEPART NAME : GEOGRAPHY ( MORNING)** 

NAME OF FACULTY: ALOKA MUKHOPADHYAY

PAPER NAME & CODE: POPULATION GEOGRAPHY LAB & GEO-G-DSE-B-6 04-P

Planned				After Implementation		
Unit/Group/ Module/Article	Topics	Reference Books	No. of Lecture Planned	Content Delivery Technique	Remarks/ Comments	
I	POPULATION PROJECTION BY ARITHMETIC METHOD	POPULATION GEOGRAPHY BY M.I. HASSAN	15	CHALK & TALK PPT PRESENTATION PRESENTATION WITH TEACHING AIDS		
II	POPULATION DENSITY MAPPING		15			
		PRACTICAL GEOGRAPHY: A SYSTEMATIC APPROACH BY A.				
III	ANALYSIS OF WORK PARTICIPATION RATE	SARKAR	15			
IV	ANALYSIS OCCUPATION STRUCTURE BY DOMINANT & DISTINCTIVE FUNCTIONS		15			

**DEPART NAME: GEOGRAPHY (MORNING)** 

NAME OF FACULTY: ALOKA MUKHOPADHYAY

PAPER NAME & CODE: SUSTAINABLE DEVELOPMENT & GEO-G-SEC-B-4/6 04-TH

Planned			After Implementation		
Topics	Reference Books	No. of Lecture Planned	Content Delivery Technique	Remarks/ Comments	
<ol> <li>Sustainable development</li> <li>Challenges of Sustainable development</li> <li>Global Environmental issues</li> <li>Global goals for sustainable development</li> </ol>	An introduction to Sustainable development by Elliot. J.  Sustainable development BY Baker, s.	30	CHALK & TALK PPT PRESENTATION PRESENTATION WITH TEACHING AIDS		

DEPART NAME : GEOGRAPHY ( MORNING) NAME OF FACULTY : ALOKA MUKHOPADHYAY PAPER NAME & CODE : GEOMORPHOLOGY & GEOG-H-CC05/MD-CC04-4/5/6 -TH

Planned			After Implem	entation	
Unit/ Group/ Module/ Article	Topics	Reference Books	No. of Lecture Planned	Content Delivery Technique	Remark s / Comme nt
1.	Time & space in geomorphology	Thornbury,	4	CHALK &	ts
1.	Time & space in geomorphology	W.D.1969. Principles	4	TALK	
2.	Degradational process	of Geomorphology	4	PPT PRESENTA	
3.	Processes of entrainment,		5	TION	
	transportation, & deposition by	Strahler,A.2016		PRESENTA	
	different geomorphic agents.	.Introducing Physical		TION WITH	
4	Development of vivou waterwark	Geography	_	TEACHING	
4.	Development of river network and landforms of uniclinal &		6	AIDS	
	folded structures. Surface	Gupta,a.2011.			
	expression of faults	Tropical			
		Geomorphology.			
5.	Development of river network	Cambridge	6		
	and landforms on granites, basalts & limestones	University Press			
		Huggett, R, Shuttleworth	4		
6.	Costal processes and landforms	Fundamentals of			
-		Geomorphology			
7.	Glacial and glacio-fluvial		4		
	processes and landforms	WEBSITES:			
8.	Aeolian and fluvio-aeolian	British Society for	4		
0.	processes and landforms	Geomorphology:	-		
		www.geomorphology.or			
9.	Models on landscape evolution	g.uk	6		
		Indian Institute of			
10.	Role of humans in landform	Geomorphologists:www.	2		
	development	indiageomorph.org			

**DEPART NAME: GEOGRAPHY (MORNING)** 

NAME OF FACULTY: ALOKA MUKHOPADHYAY

PAPER NAME & CODE: GEOMORPHOLOGY LAB GEOG-H-CC05/MD-CC04-4/5/6 P

	Planned				
Unit/	Topics	Reference Books	No. of	Content	Remarks /
Group/ Module/			Lecture Planned	Delivery Technique	Comments
Article				•	
1.	Extraction and interpretation of geomorphic information from Survey of India 1:50k topographical maps of plateau region.	Practical Geography : A Systematic Approach by A. Sarkar	7	CHALK & TALK	
2.	Construction of relative relief map, slope map(after Wentworth), drainage density map on a delineated drainage basin(c.5'x 5')	Geomorphological Analysis of Drainage basin By P.K. Sen	9	PPT PRESENTA TION PRESENTA TION WITH TEACHING	
3.	Construction of hypsometric curve and derivation of hypsometric integer of a drainage basin (c.5'x 5') of a plateau region.		7	AIDS	
4.	Determination of channel sinuosity index(channel length/valley length measured through straight line) and braiding index of rivers from topographical maps(c,10-km reach)		7		

DEPART NAME: GEOGRAPHY ( MORNING) NAME OF FACULTY : ALOKA MUKHOPADHYAY

PAPER NAME & CODE: CLIMETOLOGY GEOG-H-CC05/MD-CC04-4/5/6-TH

	Planne	Ч		After Imr	lementation
Unit/	Topics	Reference Books	No. of	Content	Remarks /
Group/			Lecture	Delivery	Comments
Module/			Planned	Technique	s
Article					
UNIT I	ELEMENTS OF THE ATMOSPHERE	D.S. LAL Climatology	3		
	Insolation: Controlling factors. Heat budget of the atmosphere	Barry, R.J. Chorley R.J.			
	2. Temperature: Horizontal and Vertical distribution. Inversion of temperature: Types, causes and	Atmosphere Weather and Climate	4	CHALK & TALK	
	consequences.	Critchfield, H.J. General	6	PPT PRESENTA	
	3. Overview of climate change: Causes, trends and predictions of global temperature rise since 1850 CE. Formation, depletion, restoration	India Meteorological Department: https://mausum.imd.gov.in	6	TION PRESENTA TION WITH TEACHING AIDS	
UNIT II	and significance of the ozone layer  ATMOSPHERIC PHENOMENA & CLIMATIC CLASSIFICATION		5		
	4. Condensation: Process and forms, Mechanism of precipitation: Bergeron- Findeisen theory, and collision & coalescence theory .Forms of precipitation.				
	5. Air mass: Typology, origin, characteristics and modification		4		
			5		

6. Types of fronts.		
1103311019313	4	
- w o. l o	4	
and baroclinic conditions		
	6	
8. Atmospheric		
-		
thunderstorms		
	4	
9. Monsoon circulation and		
mechanism with		
reference to maid	4	
10.00	4	
after Koppen (1936) and		
Thornthwaite (1948)		
	<ol> <li>Types of fronts.         Frontogenesis and frossntolysis</li> <li>Weather: Stability &amp; instability, barotropic and baroclinic conditions</li> <li>Atmospheric disturbances: Tropical Cyclones and thunderstorms</li> <li>Monsoon circulation and mechanism with reference to India</li> <li>Climatic classification after Koppen (1936) and Thornthwaite (1948)</li> </ol>	Frontogenesis and frossntolysis  7. Weather: Stability & instability, barotropic and baroclinic conditions  8. Atmospheric disturbances: Tropical Cyclones and thunderstorms  4  9. Monsoon circulation and mechanism with reference to India  10. Climatic classification after Koppen (1936) and

**DEPART NAME: GEOGRAPHY (MORNING)** 

NAME OF FACULTY: ALOKA MUKHOPADHYAY

PAPER NAME & CODE: CLIMETOLOGY LAB GEOG-H-CC05/MD-CC04-4/5/6-P

		After Implementation			
	Pla	1			
Unit/ Group/ Module/ Article	Topics	Reference Books	No. of Lecture Planned	Content Delivery Technique	Remarks / Comments
1. 2. 3.	Measurement of weather elements using analogue instruments: Mean daily temperature, air pressure, relative humidity and rainfall.  Interpretation of a daily weather map of India(any two): Pre-Monsoon, Monsoon and post-Monsoon,  Construction and Interpretation of monthly rainfall dispersion diagram(quartile method), climatic water budget	Practical Geography: A Systematic Approach by A. Sarkar  Elements of Practical Geography By R.L. Singh, R.P.B. Singh	6 12 6	CHALK & TALK PPT PRESENTA TION PRESENTA TION WITH TEACHING AIDS	
4.	Construction and Interpretation of hythergraph and climograph (after Taylor)				

# DEPARTMENT OF GEOGRAPHY VICTORIA INSTITUTION (COLLEGE)

LESSON PLAN

SEMESTER 2

MAJOR, MINOR & MDC

(CCF SYLLABUS)

Department Name: Geography

Name of Faculty: Prakriti Das

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit I: Scope and Approaches	1a. Elements of Human geography	Human Geography by Majid Hussain	1	Chalk and talk	
	1b. Nature of Human geography	Human Geography by Majid Hussain	1	Chalk and talk	
	1c. Scope of Human geography	Human Geography by Majid Hussain	1	Chalk and talk	
	1d. Recent trends in Human geography	Fundamentals of Human Geography by L.R Singh	1	Chalk and talk	
	2a. Human geography schools of thought based on Resource	Fundamentals of Human Geography by L.R Singh	2	Chalk and talk	
	2b. Human geography schools of thought based on locational approach	Fundamentals of Human Geography by L.R Singh	2	Chalk and talk	
	2c. Human geography	Fundamentals of Human Geography by L.R Singh	2	Chalk and talk	

Department Name: Geography

Name of Faculty: Prakriti Das

Unit / Group / Module / Article	Topics	opics Reference Books No of Lecture Planned		Content Delivery Technique	Remarks / Comments
	schools of thought based on landscape approach				
	2d. Human geography schools of thought based on environment approach	Fundamentals of Human Geography by L.R Singh	2	Chalk and talk	
Unit II: Social Geography	4a. Adaptation of Chenchu tribe to the environment	Human Geography by Goh Cheng Leong, Tribes of India by Ashok & Lakshmaiah	1	Chalk and talk	
	4b. Adaptation of Toda tribe to the environment	Human Geography by Goh Cheng Leong, Tribes of India by Ashok & Lakshmaiah	1	Chalk and talk	
	4c. Adaptation of Gond tribe to the environment	Human Geography by Goh Cheng Leong, Tribes of India by Ashok & Lakshmaiah	1	Chalk and talk	
	5a. Concept & evolution of post-industrial urban	Human Geography by Majid Hussain, Fundamentals of Human Geography by L.R	1	Chalk and talk	

Department Name: Geography

Name of Faculty: Prakriti Das

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	societies	Singh			
	5b.Characteristics of post-industrial urban societies	Human Geography by Majid Hussain, Human Geography, Fundamentals of Human Geography by L.R Singh	1	Chalk and talk	
		Total	17		

Department Name: Geography

Name of Faculty: Dr. Saswati Nayak

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit II: Social Geography	3a. Evolution of Hunting and food gathering society	Human Geography by Majid Hussain, Human Geography, Places and Regions in Global context by Knox & Marston	2	Chalk and talk	
	3b. Evolution of pastoral nomadism	Human Geography by Majid Hussain, Human Geography, Places and Regions in Global context by Knox & Marston	2	Chalk and talk	
	3c. Evolution of Subsistence farming society	Human Geography by Majid Hussain, Human Geography, Places and Regions in Global context by Knox & Marston	2	Chalk and talk	
	3d. Evolution of industrial society	Human Geography by Majid Hussain, Human Geography, Places and Regions in Global context by Knox & Marston	2	Chalk and talk	
Unit IV: Settlement Geography	8a.Characteristics of urban settlements	Geography of Settlements by R.Y Singh, Introduction to Settlement Geography by Sumita Ghosh	2	Chalk and talk	
	8b.Characteristics of rural	Geography of Settlements by R.Y Singh, Rural Settlement	2	Chalk and talk	

Department Name: Geography

Name of Faculty: Dr. Saswati Nayak

	Planned				
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	settlements	by R.B Mondal			
	9a. The concept of site and situation of rural settlements	Geography of Settlements by R.Y Singh, Rural Settlement by R.B Mondal	2	Chalk and talk	
	9b. Different types of rural settlements	Geography of Settlements by R.Y Singh, Rural Settlement by R.B Mondal	2	Chalk and talk	
	9c. Patterns of rural settlements	Geography of Settlements by R.Y Singh, Rural Settlement by R.B Mondal	2	Chalk and talk	
		Total	18		

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC02/MD-CC02-2/4-TH-HUMAN GEOGRAPHY

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
UNIT 3 TOPIC 6	Concept of Demographic Transition	The Dictionary of Human Geography by Johnston, Pratt, Watts, Whatmore, Human Geography by Mercier, Norton.	1	Chalk and Talk	
UNIT 3 TOPIC 6	Concept of demographic dividend along with significance	The Dictionary of Human Geography by Johnston, Pratt, Watts, Whatmore, Human Geography by Mercier, Norton. Contemporary Human Geography by Rubenstein	2	Chalk and Talk	
UNIT 3 TOPIC 7	Discussion about distribution of population in India	Geography of population by R.C.Chandna, India's Demography: changing demographic scenario in India by P.K.Majumdar	2	Chalk and Talk	
UNIT 3 TOPIC 7	Discussion about density of population in India	Same as above	1	Chalk and Talk	
UNIT 3 TOPIC 7	Discussion about growth of population in India	Geography of population by R.C.Chandna, India's Demography: changing demographic scenario in India by P.K.Majumdar	1	Chalk and Talk	
UNIT 5 TOPIC 10	Discussion about Urban settlements	Geography of population by R.C.Chandna,	2	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC02/MD-CC02-2/4-TH-HUMAN GEOGRAPHY

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	after Census of India	India's Demography: changing demographic scenario in India by P.K.Majumdar			
UNIT 5 TOPIC 10	Discussion about size —class classification of Urban settlements after Census of India	Geography of population by R.C.Chandna, India's Demography: changing demographic scenario in India by P.K.Majumdar, Census of India	2	Chalk and Talk	
		TOTAL	11		

This theory paper is shared among Smt. Pubali Ghosh, Associate Professor, Dr. Saswati Nayek, Associate Professor, Smt. Prakriti Das, Assistant Professor, Geography Dept. VIC

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Human Geography (GEOG-H-CC02/MD-CC02-2/4-P)

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	1a. Basic concept on population growth rate	Practical Geography: A Systematic Approach by A. Sarkar, Elements of Practical Geography by R.L Singh	2	Chalk and Talk	
	2b. Arithmetic growth comparing two decadal datasets	Census of India: <a href="https://xensusindia.gov.in/census.website/data/census-tables">https://xensusindia.gov.in/census.website/data/census-tables</a>	4	Chalk and Talk followed by Practice	
	3a. Concept about different types of settlements according to sites	Advanced Practical Geography by P. Basu, Practical	2	Chalk and Talk	
	3b. Revision of the details in Indian Topographical Map	Geography: A Systematic Approach by A. Sarkar	2	Chalk and Talk using Toposheets	
	3c.Identification		4	Chalk and	

**Subject Name/Code:** 

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Human Geography (GEOG-H-CC02/MD-CC02-2/4-P)

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	of those settlements from Survey of India 1:50k topographical maps			Talk followed by Practice	
		Total	14		

Subject Name/Code:

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC02/MD-CC02-2/4-P-HUMAN GEOGRAPHY LAB

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
2	Concept of Choropleth method	Practical Geography by Asis Sarkar, Elements of Practical Geography by R.L.Singh, Maps and Diagrams by Monkhouse, Advanced Practical Geography by P. Basu	1	Chalk and Talk	
2	Representation of population density of West Bengal districts-Calculation	Same as above	2	Chalk and Talk	
2	Representation of population density of West Bengal districts- Diagram	Same as above	3	Chalk and Talk	
2	Representation of population density of West Bengal districts-Interpretation	Practical Geography by Asis Sarkar, Elements of Practical Geography by R.L.Singh, Maps and Diagrams by	2	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

# Paper Name & Code: GEOG-H-CC02/MD-CC02-2/4-P-HUMAN GEOGRAPHY LAB

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
		Monkhouse, Advanced Practical Geography by P. Basu			
4	Concept of Proportional Squares	Practical Geography by Asis Sarkar, Elements of Practical Geography by R.L.Singh, Maps and Diagrams by Monkhouse, Advanced Practical Geography by P. Basu	1	Chalk and Talk	
	Construction of Proportional Squares- Calculation	Same as above	3	Chalk and Talk	
	Construction of Proportional Squares- Diagram	Same as above	2	Chalk and Talk	
	Construction of Proportional Squares- Interpretation	Practical Geography by Asis Sarkar, Elements of Practical Geography by R.L.Singh, Maps and Diagrams by Monkhouse,	2	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC02/MD-CC02-2/4-P-HUMAN GEOGRAPHY LAB

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
		Advanced Practical Geography by P. Basu			
		TOTAL	16		

This practical paper is shared between Smt. Pubali Ghosh, Associate Professor and Dr. Raj Kumar Bhattacharya , Assistant Professor, Geography Dept. VIC

Department Name: Geography

# Name of Faculty. Dr. Saswati Nayak

	Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments	
Unit: I Introduction	Definition and scope of Artificial Intelligence	AI For Everyone	2	Chalk and talk		
of Artificial Intelligence	Historical Overview and key milestones	A Beginner's Handbook for Artificial Intelligence by Saptarshi Goswami, Amit Kumar Das and Amlan Chakrabarty	2	Chalk and talk		
(AI) Dif	Differentiating AI from Human Intelligence	Amian Chakrabarty –	2	Chalk and talk		
	AI in health Care: Diagnosis	http://www.researchgate.net	1	Laptop and lecture		
Unit: III	AI in health Care: treatment and medical imaging	http://www.mastercard.com http://scholarstor-jaypee.s3	1	Laptop and lecture		
Application of AI	AI in education: personalize learning	http://www.researchgate.net/publication/352044231	1	Laptop and lecture		
	AI in education: intelligent tutoring systems	http://researchgate.net/publication/347448363	1	Laptop and lecture		
Unit;IV Ethical and	Bias and fairness of AI systems	AI For Everyone A Beginner's Handbook for Artificial Intelligence	1	Chalk and talk		
Social	Privacy and data	by Saptarshi Goswami, Amit Kumar Das and	2	Chalk and talk		

Department Name: Geography

Name of Faculty. Dr. Saswati Nayak

	Planned				
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Implications	protection concerns	Amlan Chakrabarty.			
of AI	Impact of AI on employment and the workforce	http://www.bregel.org http://www.researchgate.net.publication/385629231	1	Chalk and talk	
AI and social inequality	http://www.ris.org.in	1	Chalk and talk		
		Total	15		

**Department Name: Geography** 

Name of Faculty: Dr. Raj Kumar Bhattacharya

	Planned				
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planne d	Content Delivery Technique	Remarks / Comment s
Unit: 2 AI Subfields and Technologies	<ul><li>2a. Machine learning:</li><li>Supervised, unsupervised, and reinforcement learning</li><li>2b. Deep learning and neural networks</li></ul>	Al For Everyone A Beginner's Handbook for Artificial Intelligence by Saptarshi Goswami, Amit Kumar Das and Amlan	2	Chalk and Talk  Chalk and Talk followed by Practice	
	2c. Natural language processing (NLP) and computer vision	Chakrabarty	2	Chalk and Talk	
Unit 3: Applications of AI	3b. AI in finance: Fraud detection, algorithmic trading, and risk assessment	https://www.golabstech.com/blo g/ai-in-financial-markets-from- trading-algorithms-to-fraud- detection  Artificial Intelligence for Everyone (An Introduction to AI without Programming) by Dr. Partha Ghosh	2		

**Department Name: Geography** 

Name of Faculty: Dr. Raj Kumar Bhattacharya

	3c. AI in transportation: Autonomous vehicles and traffic optimization  3d. AI in customer service and chatbots	https://doi.org/10.4108/ew.4613 https://www.zendesk.com/in/blo g/ai-customer-service/	2	
Unit 5: Other Important Issues	5a. Ethical guidelines and responsible AI practices  5b. AI and Innovation	AI For Everyone A Beginner's Handbook for Artificial Intelligence by Saptarshi Goswami, Amit Kumar Das and Amlan Chakrabarty Artificial Intelligence for Everyone (An Introduction to AI without Programming) by Dr. Partha Ghosh	1	

**Department Name: Geography** 

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Artificial Intelligence (GEOG-SEC-Th)

5c. Emerging trends and future directions in AI	https://www.protonshub.com/blo gs/the-future-of-it	1	
5d. AI and creativity: Generative models and artistic applications		2	
Total		17	

This theory paper is shared between Dr. Saswati Nayak, Associate Professor and Dr. Raj Kumar Bhattacharya, Assistant Professor, Geography Department, VIC. This distribution is flexible depending upon the number of students opting Artificial Intelligence as SEC paper.

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Paper Name & Code: Digital Empowerment-GEO-SEC 2-TH

	Planned				
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Discussion about definition of Digital Literacy		1	Chalk and Talk	
	Discussion about current trends of Digital Technology	bout the of Understanding Digital Literacies: A Practical Introduction by R.H.Jones and C.A. Hafner rism bout of	1	Chalk and Talk	
UNIT 1  DIGITAL  LITERACY AND	UNIT 1  Discussion about evaluating the credibility of online information		1	Chalk and Talk	
DIGITAL EMPOWERMENT	Discussion about a) copyright, b) Plagiarism awareness.		1	Chalk and Talk	
	Discussion about application of our country a) Digilocker, b)E-Hospitals, c)e-Pathshala, d)SHIM, e)e-Kranti, f)e-Health		2	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Paper Name & Code: Digital Empowerment-GEO-SEC 2-TH

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Campaigns				
	Discussion about Electronic communication: a)electronic mail, b)blogs, c) Social media.	on about ic ic ication: onic  I media. on about rative olatforms on about latforms online ning on about oration ing aring,	1	Chalk and talk	
ONLINE COMMUNICATION AND COLLABORATION	Discussion about Collaborative Digital platforms		1	Chalk and talk	
	Discussion about tools/platforms for online learning		1	Chalk and talk	
	Discussion about collaboration using a)file sharing, b)messaging, c)video		1	Chalk and talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Paper Name & Code: Digital Empowerment-GEO-SEC 2-TH

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	conferencing				
ONLINE COMMUNICATION AND COLLABORATION	Discussion about online security and privacy	Understanding Digital Literacies : A Practical Introduction by R.H.Jones and C.A. Hafner	1	Chalk and talk	
		TOTAL	11		

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

Paper Name & Code: Digital Empowerment – GEOG-SEC 2 -Th

	Planned			After Imple	mentation
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Threats in digital world: introduction Different types of threats in digital world Consequences of these threats Data breach:		2	Chalk and talk	
	concept & description		1		
UNIT- I11 Digital Security	Cyber attacks: concept, types and description	Digital Empowerment by Dr. Subrata Kumar Ray	1		
	Block Chain Technology: Concept & definition Block Chain Technology: Evolution		1	Chalk and talk	
	Block Chain Technology: Uses and examples		1		

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

Paper Name & Code: Digital Empowerment – GEOG-SEC 2 -Th

	4a. Security initiatives by India government  4b. Brief discussion about each initiative Responsible online behavior: concept Responsible online behavior: necessity Digital etiquette: Concept Digital etiquette:	Digital Empowerment by Dr. Pranay Pandey	1 2		
UNIT-IV Digital citizenship and Ethics	methods and significance Online communities: concept & types Norms followed by online communities Ethical considerations in digital technology usage: Importance		2	Chalk and talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

Paper Name & Code: Digital Empowerment – GEOG-SEC 2 -Th

	Ethical considerations in digital technology usage: Types Emerging technology: Definition & concept Impact of emerging technology AI: Definition &		2		
Unit -V Emerging Technology	Al: Definition & concept  Machine Learning: Definition & concept  Differences between AI and Machine Learning	ABC of Digital Empowerment by Biplab Banerjee	2	Challe and talle	
	IOT: Definition and concept IOT and Connected devices: Relation and applicability with examples		2	Chalk and talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

Paper Name & Code: Digital Empowerment - GEOG-SEC 2 -Th

Connected devices: Types and significance			
	Total	19 hours	

This theory paper is shared between Smt. Pubali Ghosh, Associate Professor and Smt. Prakriti Das, Assistant Professor, Geography Department, VIC. This distribution is flexible depending upon the number of students opting Digital Empowerment as SEC paper.

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

Planned				After Imple	mentation
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit I: Field Data Collection and Compilation	1a. Designing of primary survey based on diverse research problems	1. Research Methodology: Methods & Techniques by C.R Kothari 2. Geospatial Techniques and Research in Geography by Das & Mallick	2	Chalk and Talk	
	1b. Relevance of pilot survey	<ol> <li>Research Methodology:         Methods &amp; Techniques by         C.R Kothari         Geospatial Techniques and         Research in Geography by         Das &amp; Mallick     </li> </ol>	2	Chalk and Talk	
	2. Sampling types and strategy based on diverse research problems	1. Research Methodology: Methods & Techniques by C.R Kothari 2. Geospatial Techniques and Research in Geography by Das & Mallick	3	Chalk and Talk	
	3a. Preparation of questionnaire	1. Research Methodology: Methods & Techniques by C.R Kothari 2. Geospatial Techniques and Research in Geography by Das & Mallick	2	Chalk and Talk	
	3b. Preparation of interview	1. Research Methodology: Methods & Techniques by	2	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

		After Imple	mentation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	schedule	C.R Kothari 2. Geospatial Techniques and Research in Geography by Das & Mallick			
		Total	11		
		Total			

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

## Paper Name and Code: Methods in Geography (GEOG-H-SEC01/MD-SEC1/2/3-TH)

		After Imple	ementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit I: Field Data Collection and	4. Data Compilation into master table		2		
Compilation	4. Data matrix in master table	N.G.Das  2. An Insight into Statistics by	2		
	5. Computer assisted field data entry- concept		2	Chalk and Talk	
	5. Tabulation of data into frequency distribution tables		2		
	6. Statistical analysis of data: measures of central tendency: Mean		2		

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

## Paper Name and Code: Methods in Geography (GEOG-H-SEC01/MD-SEC1/2/3-TH)

		After Impl	ementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit I: Field Data Collection and Compilation	6. Statistical analysis of data: measures of central tendency: Median and mode	1.Statistical Methods by     N.G.Das      2. An Insight into Statistics by     Taydeb Sarkbel and Santosh	2		
	6. Statistical analysis of data: dispersion	Kumar Dutta; Book Syndicate Private Limited	Kumar Dutta; Book Syndicate	Chalk and Talk	
Unit II: Methods in Physical Geography	7.Use of minor survey Instruments: distometer	3. Statistical Methods in Geographical Studies by A. Mahmood	1	Distometer	
		Total	14		

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

## Paper Name & Code: GEOG-H-SEC-01/MD-SEC01-1/2/3-TH-METHODS IN GEOGRAPHY

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit 2: Methods in Physical Geography	2a. Use of minor survey instruments: Brunton compass, distometer, smartphone levelling applkications	1.Manual guide book as provided by selling company	4	Practical work with field survey	
	2b.Textural analysis of grains using sieves	Manual guide book as provided by selling company	4	Practical work with field survey (sample number 50)	
	2c. Mapping and extraction of flooded areas from satellite images and digital elevation models	Practical geography: A     Systematic Approach by A.     Sarkar      Advanced Practical     Geography by P. Basu	5	Practical work with satellite images	
	2d. Mapping areal and linear extents of riverbank and coastline shift from Survey of India 1:50k maps and/or satellite images	Practical geography: A Systematic Approach by A. Sarkar	5	Practical work with satellite images and SOI 1:50k Toposheet Maps	
	J	Total	18		

Subject Name/Code:

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

	Pla	After Imple	mentation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Extraction of flooded areas from Satellite Images	Elements of Practical Geography by R.L.Singh Practical Geography by	1	Chalk & Talk, Satellite Images	
	Mapping of flooded areas from Satellite Images	A. Sarkar  Quantitative Geography	1	Chalk & Talk, Satellite Images	
UNIT 2 9	UNIT 2  Extraction of flooded areas from Digital elevation model	by A. Sarkar  Map work and Practical	1	Chalk & Talk, Digital elevation model	
	Mapping of flooded area from Digital elevation model	Geography by Gopal Singh  Elements of Practical Geography	1	Chalk & Talk, Digital elevation model	
UNIT 3	Definition and discussion about Dominant function	Statistical Methods in Geographical Studies by A. Mahmood	1	Chalk & Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

	Pla	nned		After Imple	ementation
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
11	Finding out Dominant function with examples	Elements of Practical Geography by R.L.Singh	1	Chalk & Talk	
	Definition and discussion about Distinctive function	Practical Geography by A. Sarkar	1	Chalk & Talk	
	Finding out Distinctive function with examples	Quantitative Geography by A. Sarkar  Map work and Practical Geography by Gopal Singh  Elements of Practical Geography	1	Chalk & Talk	
UNIT 3	Definition and discussion about Occupational	SAME AS ABOVE	1	Chalk & Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

	Plan	After Imple	ementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	pattern				
LINIT 3	Definition and discussion about Ternary Diagram	SAME AS ABOVE	1	Chalk & Talk	
UNIT 3 12	Ternary Diagram showing occupational patterns (after Ashok Mitra)	SAME AS ABOVE	2	Chalk & Talk	
	Definition of Accessibility map	SAME AS ABOVE	1	Chalk & Talk	
UNIT 3	Discussion about Accessibility map	SAME AS ABOVE	1	Chalk & Talk	
	Preparation of Accessibility map	SAME AS ABOVE	3	Chalk & Talk	
UNIT 3	Definition of Flow Chart	SAME AS ABOVE	1	Chalk & Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-SEC-01/MD-SEC01-1/2/3-TH-METHODS IN GEOGRAPHY

	Plai	After Imple	ementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
14	Discussion about Flow Chart	SAME AS ABOVE	2	Chalk & Talk	
UNIT 3	Preparation of Flow chart using transportation data	SAME AS ABOVE	2	Chalk & Talk	
14		Total	22		

This theory paper is shared among Smt. Pubali Ghosh, Associate Professor, Dr. Saswati Nayek, Associate Professor, Smt. Prakriti Das, Assistant Professor and Dr. Raj Kumar Bhattacharya, Assistant Professor, Geography Dept. VIC

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned		TT	
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit I: Scope and Approaches	1a. Elements of Human geography	Human Geography by Majid Hussain	1	Chalk and talk	
	1b. Nature of Human geography	Human Geography by Majid Hussain	1	Chalk and talk	
	1c. Scope of Human geography	Human Geography by Majid Hussain	1	Chalk and talk	
	1d. Recent trends in Human geography	Fundamentals of Human Geography by L.R Singh	1	Chalk and talk	
	2a. Human geography schools of thought based on Resource	Fundamentals of Human Geography by L.R Singh	2	Chalk and talk	
	2b. Human geography schools of thought based on locational approach	Fundamentals of Human Geography by L.R Singh	2	Chalk and talk	
	2c. Human geography	Fundamentals of Human Geography by L.R Singh	2	Chalk and talk	

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	schools of thought based on landscape approach				
	2d. Human geography schools of thought based on environment approach	Fundamentals of Human Geography by L.R Singh	2	Chalk and talk	
Unit II: Social Geography	3a. Evolution of Hunting and food gathering society	Human Geography by Majid Hussain, Human Geography, Places and Regions in Global context by Knox & Marston	2	Chalk and talk	
	3b. Evolution of pastoral nomadism	Human Geography by Majid Hussain, Human Geography, Places and Regions in Global context by Knox & Marston	2	Chalk and talk	
	3c. Evolution of Subsistence farming society	Human Geography by Majid Hussain, Human Geography, Places and Regions in Global context by Knox & Marston	2	Chalk and talk	

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	3d. Evolution of industrial society	Human Geography by Majid Hussain, Human Geography, Places and Regions in Global context by Knox & Marston	2	Chalk and talk	
	4a. Adaptation of Chenchu tribe to the environment	Human Geography by Goh Cheng Leong, Tribes of India by Ashok & Lakshmaiah	1	Chalk and talk	
	4b. Adaptation of Toda tribe to the environment	Human Geography by Goh Cheng Leong, Tribes of India by Ashok & Lakshmaiah	1	Chalk and talk	
	4c. Adaptation of Gond tribe to the environment	Human Geography by Goh Cheng Leong, Tribes of India by Ashok & Lakshmaiah	1	Chalk and talk	
	5a. Concept & evolution of post-industrial urban societies	Human Geography by Majid Hussain, Fundamentals of Human Geography by L.R Singh	1	Chalk and talk	
	5b.Characteristics of post-industrial urban societies	Human Geography by Majid Hussain, Human Geography, Fundamentals of Human Geography by L.R Singh	1	Chalk and talk	

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit III: Population Geography	6a. Concept and definition of Demographic transition	India's Demography by P.K Majumder, Population Geography by Chandna	2	Chalk and talk	
	6b. Significance of demographic dividend	India's Demography by P.K Majumder, Population Geography by Chandna	1	Chalk and talk	
	7a. Distribution of population in India	Population Geography by Chandna	1	Chalk and talk	
	7b. Density of population in India	Population Geography by Chandna	1	Chalk and talk	
	7c. Growth of population in India	Population Geography by Chandna	1	Chalk and talk	
Unit IV: Settlement Geography	8a.Characteristics of urban settlements	Geography of Settlements by R.Y Singh, Introduction to Settlement Geography by Sumita Ghosh	2	Chalk and talk	

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	8b.Characteristics of rural settlements	Geography of Settlements by R.Y Singh, Rural Settlement by R.B Mondal	2	Chalk and talk	
	9a. The concept of site and situation of rural settlements	Geography of Settlements by R.Y Singh, Rural Settlement by R.B Mondal	2	Chalk and talk	
	9b. Different types of rural settlements	Geography of Settlements by R.Y Singh, Rural Settlement by R.B Mondal	2	Chalk and talk	
	9c. Patterns of rural settlements	Geography of Settlements by R.Y Singh, Rural Settlement by R.B Mondal	2	Chalk and talk	
Unit V: Urban Geography	10a. Concept of size-class classification of urban settlements after Census of India	Geography of Settlements by R.Y Singh, Introduction to Settlement Geography by Sumita Ghosh	2	Chalk and talk	
	10b. Significance of size-class classification of	Geography of Settlements by R.Y Singh, Introduction to Settlement Geography by	2	Chalk and talk	

**Department Name: Geography** 

Name of Faculty: Prakriti Das

Paper Name & Code: Human Geography (GEOG-H-CC02/MD-CC02-2/4-Th)

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	urban settlements after Census of India	Sumita Ghosh			
		Total	45		

This theory paper is fully taught by Smt. Prakriti Das, Assistant Professor, Geography Dept. VIC

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	1a. Growth rate of population: Concept and definition		2	Chalk and Talk	
	1b. Calculation of Arithmetic growth comparing two decadal datasets	Advanced Practical Geography by P. Basu, Practical Geography: A Systematic Approach by A.	2	Chalk and Talk followed by Practice	
	1c.Representation of Arithmetic growth comparing two decadal datasets	Sarkar	2	Chalk and Talk	
	2a. Concept and definition of Population density	Practical Geography: A Systematic Approach by A.	2	Chalk and Talk	
	2b.Representation of population density of Indian states or West Bengal districts	Sarkar, Elements of Practical Geography by R.L Singh	2	Chalk and Talk followed by Practice	

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	by choropleth method				
	2c. Interpretation of the result		2	Chalk and Talk	
	3a. Concept about different types of settlements according to sites		2	Chalk and Talk	
	3b. Revision of the details in Indian Topographical Map	Advanced Practical Geography by P. Basu, Practical Geography: A Systematic Approach by A.	2	Chalk and Talk using toposheets	
	3c.Identification of those settlements from Survey of India 1:50k topographical maps	Sarkar	4	Chalk and Talk followed by Practice	
	4a. Concept of Proportional	Practical Geography: A Systematic Approach by A.	1	Chalk and Talk	

Department Name: Geography

Name of Faculty: Prakriti Das

Paper Name & Code: Human Geography (GEOG-H-CC02/MD-CC02-2/4-P)

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	square	Sarkar, Elements of Practical Geography by			
	4b. Significance or uses of Proportional square	R.L Singh	1	Chalk and Talk	
	4c. Construction of proportional squares depicting number of houses		1	Chalk and Talk followed by Practice	
	4d. Brief interpretation of the result		1	Chalk and Talk	
		Total	24		

This practical paper is fully taught by Smt. Prakriti Das, Assistant Professor, Geography Dept. VIC

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

## Paper Name and Code: Geomatics and Spatial Analysis (GEO-H-IDC01-1/2/3-TH)

		After Imple	ementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	1. Concept of scales	1.Practical Geography: A Systematic Approach by A. Sarkar	1		
Unit: I	1. Scales: types, significance and classification	2. Elements of Practical Geography by R.L. Singh	1		
Cartography	1.Maps projections: Classification and types	3. Maps and Diagrams by F.J. Monkhouse  4. Surveying and Levelling by T. P. Kanetkar and S.V. Kulkarni	2	Chalk and Talk	
	2. Bearing: Magnetic and true		1		

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

## Paper Name and Code: Geomatics and Spatial Analysis (GEO-H-IDC01-1/2/3-TH)

		After Imple	ementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	2. Bearing: Whole circle and reduced	1.Practical Geography: A Systematic Approach by A. Sarkar	1		
Unit: I	2. Concept of Geoid and Spheroid	2. Elements of Practical Geography by R.L. Singh	1		
Cartography	2. Geoid in special reference to WGS-84	3. Maps and Diagrams by F.J. Monkhouse	1	Chalk and Talk	
	3. Map projection Classification	4. Surveying and Levelling by T. P. Kanetkar and S.V. Kulkarni	1		

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

## Paper Name and Code: Geomatics and Spatial Analysis (GEO-H-IDC01-1/2/3-TH)

		After Imple	ementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit I: Cartography	3. Map projection: properties and uses of Simple Conical Projection	1.Practical Geography: A	2		
Unit II: Surveying	3. Concept and significance of UTM projection	2. Elements of Practical Geography by R.L. Singh  3. Maps and Diagrams by F.J. Monkhouse  4. Surveying and Levelling by T. P. Kanetkar and S.V. Kulkarni	2	Chalk and Talk	
	4. Basic concepts of Surveying		1		
	4. Survey equipment and its uses: Prismatic Compass		2		
	4. Survey equipment and its uses: Prismatic Compass		2		
		Total	18		

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Geomatics & Spatial Analysis (GEO-H-IDC01-1/2/3-Th)

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit 2	2a. Basic concepts of surveying, survey equipment, and their capabilities: Total Station		4	Practical work with field measurement	
	2a. Basic concepts of surveying, survey equipment, and their capabilities: Global Navigation Satellite System (GNSS)	Global Navigation Satellite Systems: Insights into GPS, GLONASS, Galileo, Compass and Others by B Bhatta (CRC Press)	2	Practical work with field measurement	
_		Total	6		

Subject Name/Code:

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

Paper Name & Code: Geomatics & Spatial Analysis (GEO-H-IDC01-1/2/3-Th)

		Planned		After Imple	mentation
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	5a. Principles of remote sensing	1. Remote Sensing & GIS by Bhatta 2. Fundamentals of Remote Sensing by Canada Centre for Remote Sensing (e-book)	2	Chalk and Talk	
Unit III. Romoto	5b. Types of RS satellites and sensors with reference to IRS and Landsat missions	1. Remote Sensing & GIS by Bhatta 2. Fundamentals of Remote Sensing by Canada Centre for Remote Sensing (e-book)	3	Chalk and Talk	
Unit III: Remote Sensing and Geographical Information System	6a. Principles of preparing standard false colour composites (FCCs)	https://theqgeo.com/ (website)	2	Chalk and Talk	
	6b. Principles of preparing Supervised image classification	https://theqgeo.com/ (website)	2	Chalk and Talk	
	7a.GIS data types: Spatial and non-spatial (attribute table	A Primer of GIS:     Fundamental Geographic and     Cartographic concepts by	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

Paper Name & Code: Geomatics & Spatial Analysis (GEO-H-IDC01-1/2/3-Th)

		Planned		After Imple	mentation
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	and metadata)	Harvey		•	
		2. GIS: Fundamentals,			
		Applications and			
		Implementations by Elangovan			
	7b. Raster and vector	1. A Primer of GIS: Fundamental Geographic and Cartographic concepts by Harvey 2. GIS: Fundamentals, Applications and Implementations by Elangovan	1	Chalk and Talk	
	8a. Principles of preparing attribute tables, data manipulation, query	1. A Primer of GIS: Fundamental Geographic and Cartographic concepts by Harvey  2. GIS: Fundamentals, Applications and Implementations by Elangovan	3	Chalk and Talk	
	8b. Principles of preparing of	Introduction to Buffer and Overlay Analysis by	2	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

Paper Name & Code: Geomatics & Spatial Analysis (GEO-H-IDC01-1/2/3-Th)

Planned				After Implementation	
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	overlay	Humboldt State University			
		Total	16		

This theory paper is shared among Dr. Saswati Nayek, Associate Professor, Smt. Prakriti Das, Assistant Professor and Dr. Raj Kumar Bhattacharya, Assistant Professor, Geography Dept. VIC

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

## Paper Name and Code: Geomatics and Spatial Analysis (GEO-H-IDC01-1/2/3-P)

		After Imple	After Implementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Practical proportion of S Proj 1.Ca Sim Proj 1. D Sim	1. Map projection: properties and uses of Simple Conical Projection	1.Practical Geography: A Systematic Approach by A. Sarkar  2. Elements of Practical Geography by R.L. Singh	2	Chalk and Talk	
	1.Calculation of Simple Conical Projection		2		
	1. Drawing of Simple Conical Projection		2		
	2. Concept and significance of UTM projection	4. Surveying and Levelling by T. P. Kanetkar and S.V. Kulkarni	4		
	2.Traverse survey and plotting UTM coordinate using smartphone GNSS		4		
		Total	14		

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Geomatics & Spatial Analysis Lab (GEO-H-IDC01-1/2/3-P)

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	2.Traverse survey and plotting UTM coordinates using Smartphone GNSS application	Global Navigation Satellite Systems: Insights into GPS, GLONASS, Galileo, Compass and Others by B Bhatta (CRC Press)	8	Practical work with field survey	
	4.Change detection of riverbank or coastline shift from multi-dated maps and images	1. Practical geography: A Systematic Approach by A. Sarkar 2. Advanced Practical Geography by P. Basu 3. USGS Global Visualization Viewer: <a href="https://glovis.usgs.gov">https://glovis.usgs.gov</a> 4. USGS Landsat Missions: <a href="https://www.usgs.gov/landsat-missions">https://www.usgs.gov/landsat-missions</a> 5. ISRO Bhuvan 2D and 3D Platforms: <a href="https://bhuvan-app1.nrsc.gov.in/globe/3d.php">https://bhuvan-app1.nrsc.gov.in/globe/3d.php</a>	8	Practical work with satellite images	
		Total	16		

Subject Name/Code:

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

Paper Name & Code: Geomatics & Spatial Analysis Lab (GEO-H-IDC01-1/2/3-P)

	Planned				After Implementation	
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments	
	3. Identification of land use / land cover features from standard FCCs and preparation of inventories	Practical geography: A     Systematic Approach by A.     Sarkar      Advanced Practical     Geography by P. Basu	5	Practical work with satellite images		
		Total	5			

This practical paper is shared among Dr. Saswati Nayek, Associate Professor, Smt. Prakriti Das, Assistant Professor and Dr. Raj Kumar Bhattacharya, Assistant Professor, Geography Dept. VIC

# DEPARTMENT OF GEOGRAPHY VICTORIA INSTITUTION (COLLEGE)

LESSON PLAN

SEMESTER 4

MAJOR, MINOR & MDC

(CCF SYLLABUS)

Department Name: Dr. Raj Kumar Bhattacharya

Name of Faculty: Geography

Paper Name & Code: Geomorphology GEOG-H-CC05-4-Th

Planned		,			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	1a. Fundamental study of Time and Space in geomorphology	Principles of Geomorphology by W.D.  Thornbury (Wiley-India publication)	1	Chalk and talk	
	1b. Time and Space in geomorphology: Lichty's model	2. Global Geomorphology: An introduction to the study of landforms by M.J. Summerfield	1	Chalk and talk	
	1c. Basic concept of Landform ordering	(Longman Publication)	1	Chalk and talk	
	1d. Landform ordering: Ga Scale of Tricart and Haggett		1	Chalk and talk	
	2a. Degradational processes: Causes and classification of mass wasting	1.Earth's Changing Surface by M.J. Selby     (Oxford University Press)     2. Introducing Physical Geography by A.	2	Chalk and talk	

Department Name: Dr. Raj Kumar Bhattacharya

Name of Faculty: Geography

Paper Name & Code: Geomorphology GEOG-H-CC05-4-Th

2b. Degradational processes: resultant landforms of mass wasting	Strahler (Wiley Publication)	2	Chalk and talk
3a. Process of entrainment by different geomorphic agents	Rivers: Form and Process by Marie Morisawa (Longman Higher Education)	2	Chalk and talk
3b. Process of transportation by different geomorphic agents		1	Chalk and talk
3c. Process of deposition by different geomorphic agents	<ol> <li>Geomorphology by Savindra Singh</li> <li>Introduction to Geomorphology by V.S.</li> <li>Kale and A. Gupta (Orient Blackswan</li> </ol>	2	Chalk and talk
4a. Development of river network and landforms on uniclinal structure	publication)  3.Global Geomorphology: An introduction to the study of landforms by M.J. Summerfield	2	Chalk and talk
4b. Development of river network and landforms on	(Longman Publication)	2	Chalk and talk

Department Name: Dr. Raj Kumar Bhattacharya

Name of Faculty: Geography

Paper Name & Code: Geomorphology GEOG-H-CC05-4-Th

folded structure	4. Earth's Changing Surface by M.J. Selby			
4c. Surface expression of faul	(Oxford University Press)	2	Chalk and talk	
5a. Development river network and landforms on granites		2	Chalk and talk	
5b. Development river network and landforms on basalts		2	Chalk and talk	
5c. Development river network and landforms on limestones		2	Chalk and talk	
6a. Processes of morpho dynamic agents in Coastal region		2	Chalk and talk	
6b. Landforms of morpho dynamic agents in Coastal		2	Chalk and talk	

Department Name: Dr. Raj Kumar Bhattacharya

Name of Faculty: Geography

Paper Name & Code: Geomorphology GEOG-H-CC05-4-Th

region		
7a. Glacial processes and landforms	2	Chalk and talk
7b. Glacio-fluvial processes and landforms	2	Chalk and talk
8a. Aeolian processes and landforms	2	Chalk and talk
8b. Fluvio-aeolian processes and landforms	2	Chalk and talk
9a. Models on landscape evolution: Views of Davis and King	2	Chalk and talk
9b. Models on landscape evolution: Views of Penck and Hack	2	Chalk and talk

Department Name: Dr. Raj Kumar Bhattacharya

Name of Faculty: Geography

Paper Name & Code: Geomorphology GEOG-H-CC05-4-Th

9c. Significance of systems approach		2	Chalk and talk	
10. Role of humans in landform development		2	Chalk and talk	
	Total	45		

This Theory paper is taught by Dr. Rajkumar Bhattacharya (Assistant Professor), Dept of Geography, VIC

Department Name: Dr. Raj Kumar Bhattacharya

Name of Faculty: Geography

Paper Name & Code: Geomorphology Lab & GEOG-H-CC-04-4-P

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	1a. Extraction and Interpretation of geomorphic information from Survey of India 1:50k topographical maps of plateau region: Construction of relief profiles	1a. Extraction and Interpretation of geomorphic information from Survey of India 1:50k topographical maps of plateau region: Construction of relief profiles  1b. Extraction and Interpretation of serial and superimposed profiles in plateau region  1c. Extraction and Interpretation of projected and composite profiles in	1	Practical work with Topographical Map	
	Ib. Extraction and Interpretation of serial and superimposed profiles in plateau region		3	Practical work with Topographical Map	
	1c. Extraction and Interpretation of projected and composite profiles in plateau region		3	Practical work with Topographical Map	

Department Name: Dr. Raj Kumar Bhattacharya

Name of Faculty: Geography

Paper Name & Code: Geomorphology Lab & GEOG-H-CC-04-4-P

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	2a. Construction and interpretation of relative map on a delineated drainage basin (c. 5'×5')		3	Practical work with Topographical Map	
	2b. Construction and interpretation of slope map (after Wentworth) on a delineated drainage basin		3	Practical work with Topographical Map	
	2c. Construction and interpretation of drainage density map on a delineated drainage basin		3	Practical work with Topographical Map	
	3a. Construction of hypsometric curve of a drainage basin (c. 5'×5') of a plateau region		3	Practical work with Topographical Map	

Department Name: Dr. Raj Kumar Bhattacharya

Name of Faculty: Geography

Paper Name & Code: Geomorphology Lab & GEOG-H-CC-04-4-P

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	3b. Derivation of hypsometric integer of a drainage basin (c. 5'×5') of a plateau region		3	Practical work with Topographical Map	
	3c. Interpretation of hypsometric curve and hypsometric integer of a drainage basin		1	Practical work with Topographical Map	
	4a. Determination of channel sinuosity index (channel length/valley length measured through straight line) of rivers from topographical maps (c. 10-km reach)		3	Practical work with Topographical Map	
	4b. Determination of braiding index of rivers from		3	Practical work with Topographical Map	

Department Name: Dr. Raj Kumar Bhattacharya

Name of Faculty: Geography

Paper Name & Code: Geomorphology Lab & GEOG-H-CC-04-4-P

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	topographical maps				
	4c. Interpretation of channel sinuosity index and braiding index of rivers from topographical maps		1	Practical work with Topographical Map	
		Total	30		

This Practical paper is fully shared by Dr. Rajkumar Bhattacharya (Assistant Professor), Dept of Geography, VIC

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
UNIT 1	Discussion about Insolation	Atmosphere Weather and Climate by Barry and Chorley,	1	Chalk and Talk	
Elements of the Atmosphere	Discussion about Controlling factors of insolation	General Climatology by Critchfield,	1	Chalk and Talk	
Topic 1	Heat Budget of the atmosphere	Climatology by Hidore, Oliver, And Snow	1	Chalk and Talk	
	Discussion about horizontal distribution of temperature	Atmosphere Weather and Climate by Barry and	1	Chalk and Talk	
Topic 2	Discussion about vertical distribution of temperature	Chorley,  General Climatology by Critchfield,	1	Chalk and Talk	
•	Discussion about Inversion of temperature: Types	Climatology by Lal, Climatology by Hidore,	1	Chalk and Talk	
	Discussion about Inversion of temperature: causes &	Oliver, & Snow	1	Chalk and Talk	

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	consequences				
	Discussion about				
	Causes of climate		1	Chalk and Talk	
	change				
	Discussion about				
	Trends of climate		1	Chalk and Talk	
	change	Climatology by Lal,		Chair and Tair	
	Discussion about				
	predictions of		1	Chalk and Talk	
	global				
Topic 3	temperature rise				
	since 1850 CE	Climatology by Rohli,			
	D: 1	Climatology : An			
	Discussion about	Atmospheric Science			
	formation and		1	Chalk and Talk	
	depletion of				
	Ozone layer				
	Discussion about				
	restoration of		1	Chalk and Talk	
	Ozone layer				

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Topic 3	Discussion about significance of Ozone layer	Same as above	1	Chalk and Talk	
	Discussion about Process and forms of Condensation		2	Chalk and Talk	
UNIT 2	Discussion about Bergeron- Findeisen theory	Atmosphere Weather and Climate by Barry and Chorley,	1	Chalk and Talk	
Atmospheric Phenomena and Climatic Classification Topic 4	Discussion about collision & coalescence theory	General Climatology by Critchfield, Climatology by Lal, Climatology by Hidore, Oliver, & Snow	1	Chalk and Talk	
	Discussion about Forms of precipitation		1	Chalk and Talk	

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Discussion about typology of Air mass	Atmosphere Weather and	1	Chalk and Talk	
Topic 5	Discussion about Origin of Air mass	Climate by Barry and Chorley,  General Climatology by	1	Chalk and Talk	
	Discussion about characteristics of Air mass	Critchfield, Climatology by Lal, Climatology by Hidore, Oliver, & Snow	1	Chalk and Talk	
	Discussion about modification of Air mass		1	Chalk and Talk	
	Discussion about types of fronts	Atmosphere Weather and Climate by Barry and Chorley,	2	Chalk and Talk	
Topic 6	Discussion about Frontogenesis	General Climatology by Critchfield,	2	Chalk and Talk	
	Discussion about	Climatology by Hidore, Oliver,	1	Chalk and Talk	

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Frontolysis	and Snow, Climatology by Lal,			
	Discussion about Weather stability	Climatology by Lal, Climatology by Rohli,	1	Chalk and Talk	
	Discussion about Weather stability	Climatology: An Atmospheric Science by oliver,hidore, Atmosphere Weather and Climate by Barry and Chorley,	1	Chalk and Talk	
Topic 7	Discussion about barotropic conditions		1	Chalk and Talk	
	Discussion about baroclinic conditions	General Climatology by Critchfield.	1	Chalk and Talk	
Topic 8	Discussion about atmospheric disturbances	Climatology by Lal, Climatology by Rohli,	1	Chalk and Talk	
	Discussion about Tropical cyclones	Climatology : An	3	Chalk and Talk	

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Discussion about Thunderstorms	Atmospheric Science by Oliver & Hidore,  Atmosphere Weather and Climate by Barry and Chorley,  General Climatology by Critchfield.	2	Chalk and Talk	
	Discussion about Monsoon circulation	Atmosphere Weather and Climate by Barry and Chorley,	1	Chalk and Talk	
Topic 9	Discussion about Monsoon mechanism in general	General Climatology by	1	Chalk and Talk	
	Discussion about Monsoon mechanism with reference to India		2	Chalk and Talk	
Topic 10	Climatic classification	Climatology by Lal,	2	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC05-4/5/6-TH-CLIMATOLOGY

	Planned				
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	after Koppen	Climatology by Rohli,			
	( 1936)	Climatology: An Atmospheric Science by oliver, hidore,			
	Climatic classification after Thornthwaite (1948)	Atmosphere Weather and Climate by Barry and Chorley, General Climatology by Critchfield.	2	Climatic classification	
		TOTAL	45		

This theory paper is fully taught by Smt. Pubali Ghosh, Associate Professor, Geography Department, VIC

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC 06/MD-CC 05-4/5/6-P-CLIMATOLOGY LAB

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Basic discussion about measurement of weather elements by analogue instruments	Practical Geography by A. Sarkar,	1	Chalk and Talk and relevant instrument	
TOPIC 1	Measurement of Mean daily temperature	Advanced Practical Geography by P. Basu,	1	Chalk and Talk and relevant instrument	
	Measurement of Air pressure	Elements of Practical Geography by R.L.Singh	2	Chalk and Talk and relevant instrument	
	Measurement of Relative humidity		1	Chalk and Talk and relevant instrument	
	Measurement of Rainfall		1	Chalk and Talk and relevant instrument	
	General discussion about interpretation of daily weather map of India	Maps and Diagrams by Monkhouse,  Elements of Practical	2	Chalk and Talk	
TOPIC 2	Discussion about interpretation of daily weather map of India- Monsoon	Geography by R.L.Singh, Practical Geography by A. Sarkar,	5	Chalk and Talk	
	Discussion about	Maps and Diagrams by	5	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC 06/MD-CC 05-4/5/6-P-CLIMATOLOGY LAB

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	interpretation of daily weather map of India- Post- Monsoon	Monkhouse,  Elements of Practical Geography by R.L.Singh,  Practical Geography by A.  Sarkar			
TOPIC 3	Construction and interpretation of monthly rainfall dispersion diagram-quartile method	Maps and Diagrams by Monkhouse,  Elements of Practical Geography by R.L.Singh,	3	Chalk and Talk	
	Construction and interpretation of Climatic water budget	Practical Geography by A. Sarkar,	3	Chalk and Talk	
TOPIC 4	Construction and interpretation of Hythergraph	Practical Geography by A. Sarkar,  Advanced Practical Geography by P. Basu,	3	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEOG-H-CC 06/MD-CC 05-4/5/6-P-CLIMATOLOGY LAB

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
		Elements of Practical Geography by R.L.Singh			
TOPIC 4	Construction and interpretation of Climograph	Practical Geography by A. Sarkar,  Advanced Practical Geography by P. Basu,  Elements of Practical Geography by R.L.Singh	3	Chalk and Talk	
		TOTAL 30			

This practical paper is fully taught by Smt. Pubali Ghosh, Associate Professor, Geography Department, VIC

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

	Planned				mentation
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	1a. Social Geography: Definition		1		
	1b. Nature, content & scope		2		
	2a. Social structure: Definition	Social Geography by A. Ahmed  A Text Book of Social and Cultural Geography by Jyotirmoy Sen  Geography of Population: Concepts, Determinants and Patterns by R.C Chandna	1	Chalk and talk	
	2b. Concept of class and caste		2		
Unit 1:	2c. Social process: Definition		2		
Concepts	2d. Urbanisation: concept & process		2		
	2e. Industrialisation: concept & process		1		
	2f. Migration: concept & process		1		
	3a. Social differentiation		1		

Department Name: GEOGRAPHY

Name of Faculty: Prakriti Das

	Planned				After Implementation	
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments	
	3b. Region formation					
Unit 2: Social Issues	4a. What is development?		1			
	4b. Social indicators of development	A Text Book of Social and Cultural Geography by Jyotirmoy	1			
	4c. Education as an indicator of development	Sen Social Geography of India by A. Ahmed	2	Chalk and Talk		
4d. Health as an indicator of development  5a. Social justice: concept and Indian examples	indicator of	India's Demography: Changing Demographic Scenario in India by P.K Majumdar	2			
		2				
	5b. Social		2			

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

Planned				After Imple	After Implementation	
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments	
	security: concept and Indian examples					
	6a. Contemporary social issues: concept		2			
	6b. Gender related problems with examples	Geography of Population: Concepts, Determinants and Patterns by R.C Chandna	2			
	7a. Social problems in urban areas: concept and causes	India's Demography: Changing Demographic Scenario in India by	1	Chalk and Talk		
	7b. Poverty: causes, impact and solution	ses, impact and	2			
	7c. Crime: causes, impact and		2			

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

	Planned				mentation
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	solution				
	8a. Social problems in rural areas: concept		2	Chalk and Talk	
	8b. Marginalisation and deprivation: concept and differences	Introduction to Rural Settlement by R.B Mandal	2		
	9a. Social welfare schemes: concept, types and importance	A Text Book of Social and Cultural Geography by Jyotirmoy Sen	2		
	9b. Social welfare schemes for tribes	https://socialjustice.gov.in/scheme- cat	1		
	9c. Social welfare schemes for		1		

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

Paper Name & Code: Social Geography - GEOG-H-CC07-4-Th

Planned				After Implementation	
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	women				
	9d. Social welfare schemes for children		1		
	10a. Social segregation: concept and impact	A comparative analysis of global	2	Chalk and Talk	
	10b. Comparing the cities of global north and south on basis of social segregation	north and global south economies by Lemuel Ekedegwa Odeh	2		
		TOTAL	45		

This theory paper is fully taught by Smt. Prakriti Das, Assistant Professor, Geography Department, VIC

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

		Planned		After Imple	After Implementation	
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments	
	1a. Human					
	development		2			
	index: def &		2			
	concept					
	1b. Preparation of					
	human		_			
	development		4			
	index (after					
	UNDP)	Practical Geography: A				
	1c. Interpretation	Systematic Approach by A.	2			
	2a. Gender	Sarkar				
	development index: def &		2			
	concept			Chalk and Talk		
	2b. Preparation of	Statistical Methods in				
	gender	Geographical Studies by A.				
	development	Mahmood	4			
	index (after	Wallingood	·			
	UNDP)					
	2c. Interpretation		2			
	3a. Cartograms:					
	Definition, types	Advanced Practical	1			
	and importance	Geography — a Laboratory				
	3b. Construction	Manual by P. Basu				
	of cartograms		3			
	showing					

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

	Planned				nentation
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	distribution of				
	people living				
	below poverty				
	line in India				
	3c. Interpretation		1		
	4a.				
	Questionnaire:		2		
	concept, types		2		
	and uses				
	4b. Preparation of				
	a questionnaire				
	on socio-		2		
	economic status		2		
	in rural areas				
				Chalk and Talk	
	4c. Preparation of			<u> </u>	
	a questionnaire				
	on socio-		2		
	economic status		_		
	in urban areas				
	Ad Proporation of			<u> </u>	
	4d. Preparation of		2		
	a questionnaire on access to				
	amenities in slum		2		
	areas of any				
	areas or any				

**Department Name: GEOGRAPHY** 

Name of Faculty: Prakriti Das

Paper Name & Code: Social Geography Lab - GEOG-H-CC07-4-P

		After Imple	mentation		
Unit / Group / Module / Article	- Innies   Rataranea Konks   No of Lactura Pis				Remarks / Comments
	metropolitan city				
		TOTAL	28		

This practical paper is fully taught by Smt. Prakriti Das, Assistant Professor, Geography Department, VIC

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

Paper Name and Code: Cartographic Techniques (GEOG-H-CC-08-04-TH)

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
1.Coordinate system	Rectangular coordinate system	https://study.com  https://math.libretexts.org  https://www.intmath.com	2	Lanton and lecture	
	Polar coordinate system		1	Laptop and lecture	
	Grids: Angular	https://study.com	2		
2.System of measurement	Linear system of measurement	https://math.libretexts.org https://www.intmath.com	1	Laptop and lecture	
3. Bearing	Whole-circle and reduced	Surveying and Levelling Part-I, by T.P.Kanetkar, S.V.Kulkarni; Pub:	1	Chalk and Talk	
	Magnetic and True bearing	Pune Vidyarthi Griha Prakashan	1	Chair and Fair	
4.Concept of Geoid and Spheroid	Concept of Geoid and Spheroid with special reference to	1.An Analytical Study: Map Projection by Dr. P.Roy; Pan	1	Chalk and Talk	

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

Paper Name and Code: Cartographic Techniques (GEOG-H-CC-08-04-TH)

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Everest	Pubication Company			
	Concept of Geoid and Spheroid with special reference to WGS-84	2.Elements of Cartography by A.H. Robinson, J.L.Morrison; Wiley pub.	1	Chalk and Talk	
	Conversion of angular distance to linear distance	3. Practical Geography: A Systematic Approach by A. Sarkar; Orient Longman	2	Chalk and Talk	
	Classification of Map projection	1.An Analytical Study: Map	2	Chalk and Talk	
5. Map Projection	Properties and uses of Map Projection	Projection by Dr. P.Roy; Pan Pubication Company	3	Chalk and Talk	
	Polar Zenithal Stereographic	2.Elements of Cartography by	2	Chalk and Talk	
6. Properties, uses and limitations of Projections	Simple Conical projection with one Standard Parallel	A.H. Robinson, J.L. Morrison;	2	Chalk and Talk	
	Bonne's projection	3. Practical Geography: A	2		
	Cylindrical Equal area projection	Systematic Approach by A. Sarkar; Orient Longman	2	Chalk and Talk	
	Mercator's		2		

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

Paper Name and Code: Cartographic Techniques (GEOG-H-CC-08-04-TH)

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	projection				
7. UTM Projection	Concept of UTM Projection	Elements of Cartography by A.H. Robinson, J.L. Morrison; Wiley	2	Chalk and Talk	
	Significance of UTM Projection	pub.	1		
8. Representation of Data	Dots and Sphere	1.Maps and Diagrams: Their Compilation and Construction by F.J. Wilkinson Monkhouse  2. Elements of Practical Geography by R.L. Singh; Kalyani Publishers	3	Chalk and Talk	
	Divided proportional circles		3	Chalk and Talk	
9. Representation of data	Isopleth and Choropleth		4	Chalk and Talk	
	Chorochromatic maps		2	Chalk and Talk	
10.Survey of India Topographical Maps	Reference scheme of old and open series	1.Maps and Diagrams: Their Compilation and Construction by F.J. Wilkinson Monkhouse	2	Chalk and Talk	
	Information on the margin of maps	2. Elements of Practical Geography by R.L. Singh;	1	Chalk and Talk	

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

Paper Name and Code: Cartographic Techniques (GEOG-H-CC-08-04-TH)

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
		Kalyani Publishers		_	
		Total	45		

This theory paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

# Paper Name and Code: Cartographic Techniques (GEOG-H-CC-08-04-PR)

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
1.Construction of Projections	Polar Zenithal Stereographic and checking drawing sheets	<ol> <li>1.An Analytical Study: Map</li> <li>Projection by Dr. P.Roy; Pan</li> <li>Pubication Company</li> </ol>	3	Chalk and Talk	
	Simple Conical Projection with one Standard Parallel and checking drawing sheets	<ul><li>2.Elements of Cartography by</li><li>A.H. Robinson, J.L. Morrison;</li><li>Wiley pub.</li><li>3. Practical Geography: A</li></ul>	2	Chalk and Talk	
	Bonne's Projection and checking drawing sheets	Systematic Approach by A. Sarkar; Orient Longman	3		
2. Construction of Projections	Cylindrical Equal Area Projection and checking drawing sheets	1.An Analytical Study: Map Projection by Dr. P.Roy; Pan Pubication Company	3	Chalk and Talk	
	Mercator's Projection and checking drawing sheets	<ol> <li>Practical Geography: A         Systematic Approach by A.         Sarkar; Orient Longman     </li> </ol>	3	Chalk and Talk	
3. Construction and interpretation of	Simple bar graphs and checking drawing sheets	Practical Geography: A Systematic Approach by A.	2	Chalk and Talk	

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

Paper Name and Code: Cartographic Techniques (GEOG-H-CC-08-04-PR)

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Thematic maps	Composite bar graphs and checking drawing sheets	Sarkar; Orient Longman	2	Chalk and Talk	
	Dots and spheres		4		
4.Construction and interpretation of Thematic maps	Dasymetric density and checking drawing sheets	1.Maps and Diagrams: Their Compilation and Construction by	3	Laptop and lecture	
	Isopleth and checking drawing sheets	F.J. Wilkinson Monkhouse  2. Elements of Practical Geography by R.L. Singh; Kalyani Publishers	3	Laptop and lecture	
	Chorochromatic maps and checking drawing sheets		2	Chalk and Talk	
		Total	30		

This practical paper is fully taught by Dr. Saswati Nayak, Associate Professor, Geography Department, VIC

# DEPARTMENT OF GEOGRAPHY VICTORIA INSTITUTION (COLLEGE)

LESSON PLAN

SEMESTER 6

HONOURS & GENERAL

(CBCS SYLLABUS)

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
1 Nature of Pre Modern Geography	Development of pre- modern Geography- Basic concept	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit.	1	Chalk and Talk	
	Development of pre- modern Geography- Contributions of Greek geographers	Same as above	1	Chalk and Talk	
	Development of pre- modern Geography- Contributions of Chinese geographers	Same as above	1	Chalk and Talk	
	Development of pre- modern Geography- Contributions of Indian geographers	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit.	2	Chalk and Talk	
1 Nature of Pre Modern	Discussion about 'Dark Age' in Geography	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain,	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Geography		Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.			
	Discussion about impact of 'Dark Age' in Geography	Same as above	2	Chalk and Talk	
1 Nature of Pre Modern Geography	Discussion about Arab contributions in the 'Dark Age' of Geography	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.	2	Chalk and Talk	
1 Nature of Pre Modern Geography	Discussion about the age of 'Discovery' and 'Explorations'	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Discussion about the age of 'Discovery' and 'Explorations'- Contributions of Portuguese voyages	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper	1	Chalk and Talk	
	Discussion about the age of 'Discovery' and 'Explorations'- Role of Columbus	Same as above	1	Chalk and Talk	
	Discussion about the age of 'Discovery' and 'Explorations'- Role of Vasco da Gama	Same as above	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Discussion about the age of 'Discovery' and 'Explorations'- Role of Magellan	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.	1	Chalk and Talk	
	Discussion about the age of 'Discovery' and 'Explorations'- Role of Cook	Same as above	1	Chalk and Talk	
1 Nature of Pre Modern Geography	Discussion about Cosmography and Scientific Geography and its transition from Cosmography to Scientific Geography	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
		Key Concepts in Geography by Clifford, Rice, & Valentine.			
1 Nature of Pre Modern Geography	Transition from Cosmography to Scientific Geography - Contributions of Bernard Varenius	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.  Key Concepts in Geography by Clifford, Rice, & Valentine.	1	Chalk and Talk	
	Transition from Cosmography to Scientific	Same as above	1	Chalk and Talk	
	Geography - Contributions of				

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Immanuel Kant				
	Concept of Dualism and Dichotomies	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain , Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.  Key Concepts in Geography by Clifford, Rice, & Valentine	1	Chalk and Talk	
	Discussion about General vs. Particular	Same as above	1	Chalk and Talk	
	Discussion about Physical vs. Human	Same as above	1	Chalk and Talk	
	Discussion about Regional vs.	Same as above	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Systematic				
	Discussion about Determinism vs. Possibilism	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain , Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.  Key Concepts in Geography by Clifford, Rice, & Valentine	1	Chalk and Talk	
	Discussion about Ideographic vs. Nomothetic	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.  Key Concepts in Geography by	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
2 Foundations of Modern Geography and Recent Trends	Evolution of Geographical thoughts in Germany	Clifford, Rice, & Valentine  Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.  Key Concepts in Geography by Clifford, Rice, & Valentine, The Dictionary of Human Geography by Johnston, Pratt, Watts, Whatmore	1	Chalk and Talk	
	Evolution of Geographical thoughts in France	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P.	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
		Couper.  Key Concepts in Geography by Clifford, Rice, & Valentine,  The Dictionary of Human Geography by Johnston, Pratt, Watts, Whatmore.			
Foundations of Modern Geography and Recent Trends	Evolution of Geographical thoughts in Britain	Same as above	1	Chalk and Talk	
	Evolution of Geographical thoughts in U S.A.	Same as above	1	Chalk and Talk	
2 Foundations of	Contributions of Humboldt	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain,	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Modern Geography and Recent Trends		Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.			
	Contributions of Ritter	Same as above	1	Chalk and Talk	
Foundations of Modern Geography and Recent Trends	Contributions of Richthofen	Same as above	1	Chalk and Talk	
	Contributions of Hartshorne- Schaeffer	Same as above	2	Chalk and Talk	
	Contributions of Ratzel	Same as above	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Foundations of Modern Geography and Recent Trends	Contributions of Vidal de La Blache	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.	2	Chalk and Talk	
Foundations of Modern Geography and Recent Trends	Trends of Geography in the post-World War II period	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.  Key Concepts in Geography by Clifford, Rice, & Valentine, The Dictionary of Human	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
		Geography by Johnston, Pratt, Watts, Whatmore			
	Discussion on Quantitative revolution	Same as above	3	Chalk and Talk	
	Discussion on System Approach	Same as above	3	Chalk and Talk	
Foundations of Modern Geography and Recent Trends	Discussion on Structuralism	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper.  Key Concepts in Geography by Clifford, Rice, & Valentine,  The Dictionary of Human Geography by Johnston, Pratt,	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
		Watts, Whatmore			
	Discussion on Historical Materialism	Same as above	2	Chalk and Talk	
2 Foundations of Modern Geography and Recent Trends	Basic concept of Space	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper, Modern Geographical Thought by Pete.	1	Chalk and Talk	
	Changing concept of Space	Same as above	2	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
2 Foundations of Modern Geography and Recent Trends	Changing concept of Space with special reference to Harvey	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit,  A Student's introduction to Geographical Thought by P. Couper,  Modern Geographical Thought by Pete.	2	Chalk and Talk	
2 Foundations of Modern Geography and Recent Trends	Concept of Critical Geography	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit,  A Student's introduction to Geographical Thought by P. Couper,	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
		Modern Geographical Thought by Pete.			
	Evolution of Critical Geography	Same as above	1	Chalk and Talk	
	Discussion about Behavioural Geography	Same as above	1	Chalk and Talk	
	Discussion about Humanistic Geography	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit,  A Student's introduction to Geographical Thought by P. Couper, Modern Geographical Thought	1	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Discussion about Radical	by Pete.  Same as above	1	Chalk and Talk	
	Geography	Further with of Constraint		Chair and Tair	
2 Foundations of Modern Geography and Recent Trends	Concept of Post modernism in Geography	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit, A Student's introduction to Geographical Thought by P. Couper, Modern Geographical Thought by Pete.	1	Chalk and Talk	
2	Characteristic features of	Same as above	2	Chalk and Talk	

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Foundations of	Post-modern				
Modern	period in				
Geography and	Geography				
Recent Trends					
2 Foundations of Modern Geography and Recent Trends	Discussion about Geography in 21 <sup>st</sup> Century	Fundamentals of Geographical Thought by S. Adhikari, Evolution of Geographical Thought by M. Husain, Geographical Thought by Dikshit,  A Student's introduction to Geographical Thought by P. Couper,  Modern Geographical Thought 2  Foundations of Modern Geography and Recent Trends by Pete.	2	Chalk and Talk	
		TOTAL	62		

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

#### Paper Name & Code: GEO-A-CC-6-13-P -EVOLUTION OF GEOGRAPHICAL THOUGHT LAB

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
1	Discussion about changing perception of maps of the world	Visions of the World: A History of Maps by Mitchell Beazley, J. Black	3	Chalk and Talk	
1	Discussion about changing perception of maps of the world- after Ptolemy	Same as above	5	Chalk and Talk	
1	Discussion about changing perception of maps of the world- after Mercator	Visions of the World: A History of Maps by Mitchell Beazley, J. Black	5	Chalk and Talk	
2	Discussion about history of mapping voyages	Charting the oceans by P. Whitfield, Visions of the World: A History of Maps by Mitchell Beazley, J. Black, Visions of the world: A History of Maps by J. Black	3	Chalk and Talk	
2	Detailed discussion about mapping voyages- voyage of Columbus	Same as above	5	Chalk and Talk	
2	Detailed discussion about mapping voyages- voyage of	Charting the oceans by P. Whitfield, Visions of the World: A History	5	Chalk and Talk	

Subject Name/Code: GEOGRAPHY/ GEOA

**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

## Paper Name & Code: GEO-A-CC-6-13-P -EVOLUTION OF GEOGRAPHICAL THOUGHT LAB

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	Magellan	of Maps by Mitchell Beazley, J. Black, Visions of the world: A History of Maps by J. Black			
2	Detailed discussion about mapping voyages- voyage of Captain Cook	Charting the oceans by P. Whitfield, Visions of the World: A History of Maps by Mitchell Beazley, J. Black, Visions of the world: A History of Maps by J. Black	5	Chalk and Talk	
3	Group Presentation of five to ten students on any selected school of geographical thought	A student's introduction to Geographical Thought by P. Couper	30	Chalk and Talk, Poster preparation and presentation.	
		TOTAL	61		

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Hazard Management (GEO-A- CC-14-TH)

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit I: Concepts	1a. Classification of hazards and disasters		2	Chalk and talk	
	1b. Hazard continuum	Environmental Hazards: Assessing Risk and Reducing Disaster by K. Smith	2	Chalk and talk	
	2a. Approaches to hazard study: Risk perception	Disaster Management by Savindra Singh	2	Chalk and talk	
	2b. Approaches to hazard study: vulnerability assessment	Disaster News Network: secure.disasternews.net	2	Chalk and talk	
	2c. Hazard paradigms		2	Chalk and talk	
	3a. Responses to hazards: Preparedness, trauma, and aftermath		3	Chalk and talk	

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Hazard Management (GEO-A- CC-14-TH)

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	3b. Resilience, capacity building		2	Chalk and talk	
	4a. Basic concept of Hazards mapping: Data and geospatial techniques	Environmental Hazards: Assessing Risk and Reducing Disaster by K. Smith  Disaster Management by Savindra Singh	1	Chalk and talk	
	4b. Earthquake Hazards mapping	Environmental Hazards: Assessing Risk and Reducing Disaster by K. Smith	2	Practical work with secondary database	
	4c. Landslide Hazards mapping		2	Practical work with secondary database	
		Total	20		

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Hazard Management (GEO-A- CC-14-TH)

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit II: Hazard- specific Study with Focus on West Bengal and India	1. Earthquake: Factors, vulnerability, consequences, and management	USGS Earthquake Hazards Programme:  www.earthquake.usgs.gov	5	Chalk and talk & Practical work with secondary database	
	2. Landslide: Factors, vulnerability, consequences, and management	AGU landslide Blog: blogs.agu.org/landslide blog	5	Chalk and talk & Practical work with secondary database	
	3. Land subsidence: Factors, vulnerability, consequences, and		5	Chalk and talk & Practical work with secondary database	

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Hazard Management (GEO-A- CC-14-TH)

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	management				
	4. Tropical cyclone: Factors, vulnerability, consequences, and management		5	Chalk and talk & Practical work with secondary database	
	5. Flood: Factors, vulnerability, consequences, and management	Dartmouth Flood Observatory: floodobservatory.colorado.edu  ndia Meteorological Department Cyclone Page: www.rsmcnewdelhi.imd.gov.in/index.php?lang=en	5	Chalk and talk & Practical work with secondary database	
	6. Riverbank erosion: Factors, vulnerability, consequences,		5	Chalk and talk & Practical work with secondary database	

Department Name: Geography

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: Hazard Management (GEO-A- CC-14-TH)

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	and management				
	7. Fire: Factors, vulnerability, consequences, and management		5	Chalk and talk & Practical work with secondary database	
	8. Biohazard: Classification, vulnerability, consequences, and management		5	Chalk and talk & Practical work with secondary database	
		Total	40		

Department Name: Geography

Name of Faculty: Dr.Raj Kumar Bhattacharya

Paper Name & Code: Hazard Management Lab (GEO-A-CC-6-14-P)

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Group-A	Landslide susceptibility mapping	AGU landslide Blog: blogs.agu.org/landslide blog	10	Practical work with secondary database	
Group-B	River bank erosion	River bank erosion news:  https://www.newsclick.in/river- bank-erosion-break-havoc- bengal-maldaha-murshidabad	10	Practical work with secondary database	
Group-C	Flood susceptibility mapping	Dartmouth Flood Observatory: floodobservatory.colorado.edu	10	Practical work with secondary database	
		Total	30		

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak Paper Name and Code: Resource Geography (GEO-A-DSE-06-04-TH)

		After Imple	ementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	1.Nature of resource: concept and classification 2. Approaches to	1.Economic and Social geography by R. Knowles and J.	4	-	
Unit: I	Unit: I  Resource and Development  Resource and Development  Resource and Development  Resource and Development  Resource utilization: community based adaptive 3. Significance of Resource Backbone of economic growth and development	Wareing.  2. Resource Studies by A. Mitra	3		
		3. The Use and Abuse of Nature: An ecological History of India and Ecology and Equity by M. Gadgil and R. Guha	3	Chalk and Talk	
		4.Contemporary Development Economics; From Adam Smith to Amartya Sen by Felix Raj, Sampat Mukherjee.	2		
		Total			

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

		After Imple	ementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	3. Significance of Resource Backbone of economic growth and development	1.Economic and Social geography by R. Knowles and J. Wareing.	3		
	4. Pressure on resource: Appraisal	2. Resource Studies by A. Mitra	2		
Unit: I	4. Conservation of natural resource	3. The Use and Abuse of Nature: An ecological History of India and Ecology and Equity by M. Gadgil and R. Guha		Chalk and Talk	
	5. Problems of resource depletion: Global Scenario:	4.Contemporary Development Economics; From Adam Smith	3		
	forest	to Amartya Sen by Felix Raj, Sampat Mukherjee.	2		
		Total			

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak Paper Name and Code: Resource Geography (GEO-A-DSE-06-04-TH)

	•	After Impl	ementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	5. Problems of resource depletion: Global Scenario: water	1.Economic and Social geography by R. Knowles and J.	2		
	5. Problems of resource depletion: Global Scenario: fossil fuel	Wareing.  2. Resource Studies by A. Mitra	3		
Unit: I	6. Sustainable resource development	and Ecology and Equity by M.  Gadgil and R. Guha	3	Chalk and Talk	
		4.Exploitation, Conservation and Preservation: A Geographical Perspective on Natural Resource use by S.N. Cutter			

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

		After Implementation			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit II: Resource Conflict and Management	7.Distribution, utilization, problems, and management of metallic mineral resource: Iron ore 7.Distribution, utilization, problems and management of metallic mineral resource: bauxite 7.Distribution, utilization, problems and management of metallic mineral resource: copper	1.Geography of Resources: Exploitation, Conservation and Management by A. Gautam.  2.Environmental Science: A Global Concern pub: The McGraw-Hill edited by Kevin.T. Kane.  3.Resource Studies by A. Mitra  4.Contemporary Development Economics; From Adam Smith to Amartya Sen by Felix Raj, Sampat Mukherjee.	2 2	Chalk and Talk	

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

		After Imple	mentation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit II: Resource Conflict and Management	8.Distribution, utilization, problems and management of non-metallic mineral resources: Limestone	1.Geography of Resources: Exploitation, Conservation and Management by A. Gautam.	2		
	8.Distribution, utilization, problems and management of non-metallic mineral resources: Mica	2.Environmental Science: A Global Concern pub: The McGraw-Hill edited by Kevin.T. Kane.	2	Chalk and Talk	
	8.Distribution, utilization, problems and management of non-metallic mineral resources: Gypsum	3.Resource Studies by A. Mitra 4.Contemporary Development Economics; From Adam Smith to Amartya Sen by Felix Raj, Sampat Mukherjee.	2		

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

		Planned		After Imple	ementation
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	9.Distribution, utilization, problems and management of energy resources: conventional	1.Geography of Resources: Exploitation, Conservation and Management by A. Gautam.	3		
Unit II: Resource Conflict and Management	9.Distribution, utilization, problems and management of energy resources:	2.Environmental Science: A Global Concern pub: The McGraw-Hill edited by Kevin.T. Kane.	3	Chalk and Talk	
	non-conventional.  10. Contemporary energy crisis.	3.Resource Studies by A. Mitra     4.Contemporary Development Economics; From Adam Smith to	2		
	10. Future scenario of energy resources	Amartya Sen by Felix Raj, Sampat Mukherjee.	2		

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

Paper Name and Code: Resource Geography (GEO-A-DSE-06-04-TH)

		Planned		After Imple	ementation
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	11. Politics of power	1.Geography of Resources: Exploitation, Conservation and Management by A. Gautam.	3		
Unit II: Resource	resources  12. Limits to growth	2.Environmental Science: A Global Concern pub: The McGraw-Hill edited by Kevin.T.	1		
Conflict and Management	12. Sustainable use of resources	Kane.	2	Chalk and Talk	
	12. Concept of resource sharing	<ul><li>3.Resource Studies by A. Mitra</li><li>4.Contemporary Development Economics; From Adam Smith to Amartya Sen by Felix Raj, Sampat Mukherjee.</li></ul>	2		
		Total	60		

This theory paper is fully taught by Dr. Saswati Nayek, Associate Professor, Geography Dept. VIC

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

	Pl	After Imple	ementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Resource Geography Lab	1.Mapping and area estimate of changes in forest or vegetation cover from topo-maps 1.Mapping and area estimate of changes in forest or vegetation cover from satellite images 1. Comparative Study of area estimated from Topo-map and satellite Imagery and interpretation  2.Mapping and number estimate water bodies in Topo-map	1.Topo-sheet and Satellite imageries of 2012 1nd 2019  2. Remote Sensing and Image Interpretation by T.M. Lillesand and R. W. Kiefer  3. Remote Sensing by B. Bhatta	5 5 2	Chalk and Talk	

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

Commer   C		After Impl	ementation			
Resource Geography Lab  2. Comparative study and changes from Topomap and satellite imageries  2. Remote Sensing and Image Interpretation by T.M. Lillesand and R. W. Kiefer  Chalk and Talk	Module /	Topics	Reference Books	Lecture	Delivery	Remarks / Comments
2. Interpretation 2. Checking the work sheets 4		estimation of water bodies in satellite imageries of 2012 and 2019  2. Comparative study and changes from Topomap and satellite imageries  2. Interpretation  2. Checking the work	imageries of 2012 1nd 2019  2. Remote Sensing and Image Interpretation by T.M. Lillesand	2	Chalk and Talk	

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

	Pl	After Impl	ementation		
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	3. Decadal Changes in state-wise production of Coal: calculation and drawing		3		
	3. Checking the rough sheet		2		
Resource Geography Lab	3. Interpretation of changes in Coal production	1.Coal Production Data from Coal India Ltd Report	3		
	3. Decadal Changes in state-wise production of Iron-ore: calculation and drawing	2. Maps and Diagrams: Their Compilation and Construction by F.J. Monkhouse and H. R. Wilkinson	3	Chalk and Talk	
	3. Checking the rough sheet	3. Data Platform: data.gov.in	3		
	3. Interpretation of changes in Iron-ore production		1		

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

Paper Name and Code: Resource Geography (GEO-A-DSE-06-04-P)

	Pl	anned		After Impl	ementation
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	4. Collection of decadal Human Development indices data and introduction.		2		
	4. Calculation od Hunman Development Index state wise	Human Development Report     2017	3		
Resource Geography Lab	4.Representation on map of India	2. Human Development Report India 2011	3	Chalk and Talk	
	4. Interpretation of Comparative analysis of Human Development index.	3. Readings in Human Development by s. Fukuda-Parr & S.A.K. Kumar	3		
	4. Checking the work sheets.		3		
		Total	59		

This practical paper is fully taught by Dr. Saswati Nayek, Associate Professor, Geography Dept. VIC

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Unit I: Geography of India	1a.Physiographic divisions of India	Advanced Geography of India by Alka Gautam	1	Chalk and Talk	
	1b.Tectonic provinces of India	https://iasscore.in/topical-analysis/what-are-the- tectonic-divisions-of-india	2	Chalk and Talk	
	2a.Climate of India and its classification		2	Chalk and Talk	
	2b. Soil of India and its classification	Advanced Geography of India by Alka Gautam	1	Chalk and Talk	
	2c. Vegetation of India and its classification	India: A Comprehensive Geography by Khullar	1	Chalk and Talk	
	2d. Interrelation between climate, soil and vegetation of		1	Chalk and Talk	

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	India				
	3a. Population distribution of India		1	Chalk and Talk	
	3b. Population growth of India		1	Chalk and Talk	
	3c. Structure of India's population	Population Geography by S.D Maurya  Geography of Population by R.C Chandna	1	Chalk and Talk	
	3d. India's population policies		1	Chalk and Talk	
	4a. Tribes of India: definition and characteristics	Social Geography by A. Ahmed	1	Chalk and Talk	

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	4b. Gaddi tribe and their socio- economic and cultural lifestyle	Social Geography by Jyotirmoy Sen  Geography of India by R.C Tiwari  Fundamentals of Human Geography by L.R Singh	1	Chalk and Talk	
	4c. Toda tribe and their socio- economic and cultural lifestyle		1	Chalk and Talk	
	4d. Santal tribe and their socio- economic and cultural lifestyle		1	Chalk and Talk	
	4e. Jarwa tribe and their socio- economic and cultural lifestyle		1	Chalk and Talk	

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	5a. Agricultural regions of India (ICAR 1972).	Geography of India by R.C Tiwari	1	Chalk and Talk	
	5b. Green revolution in India (Phases 1 and 2) and its consequences	Advanced Geography of India by Alka Gautam	3	Chalk and Talk	
	6a. Mineral and power resources in India: Introduction, problems and prospects	Advanced Geography of India by Alka Gautam	1	Chalk and Talk	
	6b. Distribution and utilisation of iron ore in India	Economic Geography by Prithwish Roy	1	Chalk and Talk	

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		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	6c. Distribution and utilisation of coal in India		1	Chalk and Talk	
	6d. Distribution and utilisation of petroleum		1	Chalk and Talk	
	6e. Distribution and utilisation of natural gas		1	Chalk and Talk	
	7a. Industrial development in India: Innovations and challenges	Advanced Geography of India by Alka Gautam  Geography of India by R.C Tiwari	1	Chalk and Talk	
	7b. Automobile industry in India		1	Chalk and Talk	

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	7c. Information technology in India		1	Chalk and Talk	
	8a.Physiographic Regionalisation of India after R.L. Singh	India: A Regional Geography by R.L Singh	2	Chalk and Talk	
	8b. Economic Regionalisation of India after P. Sengupta	http://www.rnlkwc.ac.in	2	Chalk and Talk	
Unit II: Geography of West Bengal	9a. Physiographic divisions of West Bengal,		1	Chalk and Talk	

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	9b. Forest resources of West Bengal		1	Chalk and Talk	
	9c. Water resources of West Bengal		1	Chalk and Talk	
	10a. Agriculture of West Bengal with reference to tea & jute	Samajik, Sanskritik o Bharater Anchalik Bhugol by Dr. Sanjib Majumder	2	Chalk and Talk	
	10b. Mining in West Bengal with reference to coal		1	Chalk and Talk	
	10c. Industry in West Bengal		4	Chalk and Talk	

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		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	with reference to iron and steel, petrochemicals, tourism, IT				
	11a. Population growth in West Bengal		1	Chalk and Talk	
	11b.Population distribution in West Bengal		1	Chalk and Talk	
	11c. Human development in West Bengal		1	Chalk and Talk	
	12a. Regional issues in	https://www.ijhssi.org/papers/v3(7) /Version-2/H0372042047.pdf	2	Chalk and Talk	

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Name of Faculty: Prakriti Das

Paper Name & Code: Geography of India & GEO-A-DSE-B-6-08-TH

	Planned					
Unit / Group / Module / Article	Group / Module / Reference Books		No of Lecture Planned	Content Delivery Technique	Remarks / Comments	
	Darjeeling Hills					
	12b. Regional issues in Sundarban	https://www.academia.edu/12524744/Environmental_Scenario_of_Sunderbans_Planning_and_Management	2	Chalk and Talk		
		Total	50			

This theory paper is fully taught by Smt. Prakriti Das, Assistant Professor, Geography Dept. VIC

Department Name: Geography

Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	1a.Understanding the concept of monthly temperature and rainfall graphs and their significance		1	Chalk and talk	
	1b. Collection of data for drawing monthly temperature and rainfall graphs of five selected stations from different physiographic regions of India		3	Chalk and talk	

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Name of Faculty: Prakriti Das

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	1c. Drawing of the graphs and interpretation	BOOKS Statistical Methods in Geographical Studies by A. Mahmood	4	Chalk and talk	
	2a. Definition, theoretical concept and usefulness of Crop combination	Practical Geography: A Systematic Approach by A. Sarkar	1	Chalk and talk	
	2b. Calculation of Crop combination for comparing any two contrasting districts from West Bengal	Fundamentals of Practical Geography by L.R Singh	3	Chalk and talk	
	2c.Representation of Crop combination and		2	Chalk and talk	

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	Planned						
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments		
	interpretation						
	3a. What is meant by annual trends of production of mineral resources and manufacturing goods?	WEBSITES  India Meteorological Department: www.imd.gov.in	1	Chalk and talk			
	3b. Calculation for drawing the graphs and linear trend lines of production of a selected mineral resources and manufacturing goods	Trending Economics (India's industrial production): tradingeconomics.com/india/industrial-production  Planning Commission	4	Chalk and talk			

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		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	3c. Drawing of the linear trend lines, representation and interpretation	(West Bengal Development Report 2010): planningcommission.nic.in/plans/stateplan/sdr/sdr_wb1909.pdf	3	Chalk and talk	
	4a. Definition, concept and significance of Composite Index	Government of West Bengal: District Statistical Handbooks (e.g. bardhaman.nic.in/dshb05.pdf)	1	Chalk and talk	
	4b. Data collection and calculation of Composite Index showing comparison of selected developed and backward states		2	Chalk and talk	

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Paper Name & Code: Geography of India Lab & GEO-A-DSE-B-6-08-P

	Planned				
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	of India				
	4c.Representation and Interpretation		2	Chalk and talk	
		Total	27		

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**Department Name: GEOGRAPHY** 

Name of Faculty: PUBALI GHOSH

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
UNIT 1	Population	Population Geography by M.I.Hassan, Human Geography by M.	1	Chalk and Talk	
POPULATION DYNAMICS		Hussain.			
211111111111111111111111111111111111111	Relation between population geography and	Demography by Bhatt and Desai, Population Geography by H.R. Jones	1	Chalk and Talk	
	Sources of population data	Population Geography by M.I.Hassan, Human Geography by M. Hussain, Census of India.	1	Chalk and Talk	
	of such data	Population Geography by M.I.Hassan, Human Geography by M. Hussain, Census of India.	1	Chalk and Talk	
	mapping	Population Geography by H. R. Jones, Population Geography by H. R. Barret.	2	Chalk and Talk	

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Name of Faculty: PUBALI GHOSH

UNIT	TOPICS	REFERENCE BOOKS	NO. OF LECTURE PLANNED	CONTENT DELIVERY TECHNIQUE	REMARKS
UNIT 1 POPULATION DYNAMICS	distribution	Population Geography by M.I.Hassan, Human Geography by M. Hussain. Population Geography by H. R. Jones, Population Geography by H. R. Barret.	1	Chalk and Talk	
	Population density and growth	Same as above	1	Chalk and Talk	
	Classical theories on population growth	Same as above	2	Chalk and Talk	
	Modern theories on population growth	Same as above	2	Chalk and Talk	
	Demographic transition model	Population Geography by M.I.Hassan, Population Geography by H. R. Jones,	1	Chalk and Talk	

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Name of Faculty: PUBALI GHOSH

		Population Geography by H. R. Barret.			
UNIT 1 POPULATION DYNAMICS	World patterns of population distribution and growth	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret	2	Chalk and Talk	
	World determinants of population distribution and growth	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret	1	Chalk and Talk	
	Concept of Optimum population	Population Geography by M.I.Hassan, Population Geography by H. R. Jones, Population Geography by H.	1	Chalk and Talk	

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		R. Barret			
UNIT 1 POPULATION DYNAMICS	Population distribution in India	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret	2	Chalk and Talk	
	Population density in India	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret	1	Chalk and Talk	
	Population growth in India	Population Geography by M.I.Hassan, Population Geography by H. R. Jones, Population Geography by H. R. Barret	1	Chalk and Talk	

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UNIT 2 POPULATION AND DEVELOPMENT	Discussion on Population composition and its types	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret	2	Chalk and Talk
	Discussion on the concept of Age-sex and its types	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret	1	Chalk and Talk
	urban Population composition.	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret	1	Chalk and Talk

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	Discussion on the concept of literacy and education.	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret	1	Chalk and Talk	
UNIT 2 POPULATION AND DEVELOPMENT	Concept of fertility, Measurements of fertility	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret	2	Chalk and Talk	
	Concept of Mortality, Measurements of Mortality	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H.	2	Chalk and Talk	

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		R. Barret			
	and life table	The Dictionary of Human Geography by Johnston, Pratt, Watts, Whatmore, Population Geography by H. R. Jones, Population Geography by H. R. Barret.	1	Chalk and Talk	
UNIT 2 POPULATION AND DEVELOPMENT	India	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret	2	Chalk and Talk	
	of Urbanization in India focusing on its future	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H.	3	Chalk and Talk	

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Name of Faculty: PUBALI GHOSH

		R. Barret		
	Discussion about the occupational structure of India	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret	2	Chalk and Talk
UNIT 2 POPULATION AND DEVELOPMENT	Discussion about the concept of Migration	Key concepts in migration by Bartram, Poros, Monfort, The Principles of population studies by Kanitkar.	1	Chalk and Talk
	Discussion about the causes of Migration	Key concepts in migration by Bartram, Poros, Monfort, The Principles of population studies by Kanitkar	1	Chalk and Talk
	Discussion about the types of Migration	Key concepts in migration by Bartram, Poros, Monfort, The Principles of population studies by Kanitkar	1	Chalk and Talk
UNIT 2 POPULATION AND DEVELOPMENT	Discussion about National pattern of Migration	Key concepts in migration by Bartram, Poros, Monfort, The Principles of population	2	Chalk and Talk

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		studies by Kanitkar			
	International pattern of Migration	Key concepts in migration by Bartram, Poros, Monfort, The Principles of population studies by Kanitkar	1	Chalk and Talk	
	National pattern of Migration with	Key concepts in migration by Bartram, Poros, Monfort, The Principles of population studies by Kanitkar	1	Chalk and Talk	
	International pattern of Migration with	Key concepts in migration by Bartram, Poros, Monfort, The Principles of population studies by Kanitkar	1	Chalk and Talk	
UNIT 2 POPULATION AND DEVELOPMENT	Discussion about Population and Development	Population and Development by Dyson, Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret	1	Chalk and Talk	

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Populat	ion – Ceregions P  H  H  R  F  b	Geography of population by Chandna, Population Geography by M.I.Hassan, Human Geography by M. Hussain, Population Geography by H. R. Barret, Population and Development by Dyson	2	Chalk and Talk	
	oment Index   C   F   F   R   F	The Dictionary of Human Geography by Johnston, Pratt, Watts, Whatmore, Population Geography by H. R. Jones, Population Geography by H. R. Barret.	1	Chalk and Talk	
Human Develop	oment Index P F R P F	The Dictionary of Human Geography by Johnston, Pratt, Watts, Whatmore, Population Geography by H. R. Jones, Population Geography by H.R. Barret.	1	Chalk and Talk	
UNIT 2 Populat POPULATION in Deve		Population Geography by	1	Chalk and Talk	

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AND DEVELOPMENT	countries	M.I.Hassan, Human Geography by M. Hussain. Population Geography by H. R. Jones, Population Geography by H. R. Barret.			
	Population policies in Less developed countries	Population Geography by M.I.Hassan, Human Geography by M. Hussain. Population Geography by H. R. Jones, Population Geography by H. R. Barret. Geography of population by Chandna	1	Chalk and Talk	
	Population policies of India	Same as above	1	Chalk and Talk	
	Relationship between Population and Environment	Same as above	1	Chalk and Talk	

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	Relationship between Population and Environment focusing the future implications	Same as above	1	Chalk and Talk	
UNIT 2 POPULATION AND DEVELOPMENT		The Dictionary of Human Geography by Johnston, Pratt, Watts, Whatmore, Population Geography by H. R. Jones, Population Geography by H.R. Barret	1	Chalk and Talk	
	Ageing of population	The Dictionary of Human Geography by Johnston, Pratt, Watts, Whatmore, Population Geography by H. R. Jones, Population Geography by H.R. Barret	1	Chalk and Talk	
	Declining sex ratio	The Dictionary of Human Geography by Johnston, Pratt, Watts, Whatmore, Population Geography by H. R. Jones, Population Geography by H.R. Barret	1	Chalk and Talk	

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Name of Faculty: PUBALI GHOSH

#### Paper Name & Code: GEO-G-DSE-B-6-04-TH-POPULATION GEOGRAPHY

POPULATION	Population and environment dichotomy	The Dictionary of Human Geography by Johnston, Pratt, Watts, Whatmore, Population Geography by H. R. Jones, Population Geography by H.R. Barret	1	Chalk and Talk	
= '	Discussion about impact of HIV/ AIDS	The Dictionary of Human Geography by Johnston, Pratt, Watts, Whatmore, Population Geography by H. R. Jones, Population Geography by H.R. Barret	1	Chalk and Talk	
		TOTAL	61		

This theory paper is shared between Smt. Pubali Ghosh, Associate Professor and Dr. Raj Kumar Bhattacharya, Assistant Professor, VIC

Department Name: GEOGRAPHY

Name of Faculty: PUBALI GHOSH

		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
1	Discussion on the concept of Population projection	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse.	1	Chalk and Talk	
1	Discussion about Arithmetic method	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse.	2	Chalk and Talk	
1	Calculation	Same as above	5	Chalk and Talk	
1	Drawing	Same as above	4	Chalk and Talk	

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	Applicability	Same as above	1	Chalk and Talk	
	Interpretation	Same as above	2	Chalk and Talk	
2	Concept of Population Density	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse, Population Geography by M. Hassan.	1	Chalk and Talk	
2	Discussion about population density mapping	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse	1	Chalk and Talk	
	Necessity of such mapping	Same as above	1	Chalk and Talk	

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2	Data collection	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse	2	Chalk and Talk	
2	Calculation	Same as above	4	Chalk and Talk	
2	Mapping	Same as above	3	Chalk and Talk	
2	Applicability	Same as above	1	Chalk and Talk	
2	Interpretation	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse	2	Chalk and Talk	
3	Discussion on	Statistical methods in	1	Chalk and Talk	

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	Work Participation Rate	Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse			
3	Necessity of such analysis	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse, Population Geography by M. Hassan	1	Chalk and Talk	
3	Data collection	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by	2	Chalk and Talk	

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		Monkhouse			
3	Analysis of Total work participation rate- Calculation	Same as above	2	Chalk and Talk	
3	Analysis of gender- wise work participation rate-Calculation	Same as above	2	Chalk and Talk	
3	Total work participation rate- diagram	Same as above	2	Chalk and Talk	
3	Gender- wise work	Same as above	2	Chalk and Talk	

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	participation rate- diagram				
3	Applicability	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse, Population Geography by M. Hassan	1	Chalk and Talk	
3	Interpretation	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse, Population Geography by M. Hassan	2	Chalk and Talk	

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4	Concept of occupation structure	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse, Population Geography by M. Hassan	1	Chalk and Talk	
4	Concept of Dominant and Distinctive function	Same as above	1	Chalk and Talk	
4	Necessity of such analysis	Same as above	1	Chalk and Talk	
4	Data collection	Same as above	2	Chalk and Talk	
4	Calculation	Statistical methods in Geographical Studies	4	Chalk and Talk	

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		by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse			
4	Diagram	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse.	3	Chalk and Talk	
4	Applicability	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse, Population Geography	1	Chalk and Talk	

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Name of Faculty: PUBALI GHOSH

Paper Name & Code: GEO-G-DSE-B-6-04-P-POPULATION GEOGRAPHY LAB

		by M. Hassan			
4	Interpretation	Statistical methods in Geographical Studies by A. Mahmood, Practical Geography by A. Sarkar, Maps and diagrams by Monkhouse.	2	Chalk and Talk	
		TOTAL	60		

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Name of Faculty: PUBALI GHOSH

Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
1	Concept of Sustainable development	Sustainable development by Baker, Understanding Sustainable development by Blewitt, An introduction to Sustainable development by Elliott.	1	Chalk and Talk	
1	Discussion on the historical background of Sustainable development	Same as above	2	Chalk and Talk	
1	Components of Sustainable development	Same as above	1	Chalk and Talk	

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Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
1	Limitations of Sustainable development	Sustainable development by Baker, Understanding Sustainable development by Blewitt, An introduction to Sustainable development by Elliott.	1	Chalk and Talk	
4	Discussion about global goals for Sustainable development	Sustainable development by Baker, Understanding Sustainable development by Blewitt, An introduction to Sustainable development by Elliott, An introduction to	2		

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		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
		Sustainable development by Rogers,Jalal,Boyd.			
4	Discussion about global goals for Sustainable development with special reference to Domain	Same as above	2		

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Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
4	Discussion about global goals for Sustainable development with special reference to conflict	Same as above	1		

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		Planned			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
4	Discussion about global goals for Sustainable development with special reference to crisis	Sustainable development by Baker, Understanding Sustainable development by Blewitt, An introduction to Sustainable development by Elliott, An introduction to Sustainable development by Rogers, Jalal,Boyd.	1		
	Discussion	Sustainable	1		

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Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	about global goals for Sustainable development with special reference to compromise	development by Baker, Understanding Sustainable development by Blewitt, An introduction to Sustainable development by Elliott, An introduction to Sustainable development by Rogers, Jalal, Boyd.			
		TOTAL	12		

Department Name: Geography

Name of Faculty: Prakriti Das

# **Paper Name & Code:** Sustainable Development GEO-G-SEC-B-4/6-04-TH

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
	2a. Challenges of sustainable development	https://journals.lww.com/ijph/fulltext/2016/60040/ sustainable_development_goalschallenges_and.1.aspx	1	Chalk and talk	
	2b.Determinants of sustainable development	https://bhattadevuniversity.ac.in/docs/studyMaterial/ Jyotismoy_Bora_Geography/Dr.%20Jyotishmoy%20Bora_ Geography_VI%20Sem%20(M)_Sustainable%20 Development%20Definitions,%20Measures.pdf	1	Chalk and talk	
	2c. Linkage among sustainable development, environment and poverty	https://www.adb.org/sites/default/files/ publication/28124/op007.pdf	4	Chalk and talk	
		Total	6		

**Department Name: Geography** 

Name of the Faculty: Dr. Saswati Nayak

## Paper Name and Code: Sustainable Development (GEO-G-SEC-B-04/6-04-TH)

		After Implementation			
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Topic: 3 Global Environmental Issues	3.Population: growth and its impact on resources and environment	1. Resource Studies by A. Mitra  2. The Use and Abuse of Nature: An ecological History of India and Ecology and Equity by M. Gadgil and R. Guha  3. Contemporary Development Economics; From Adam Smith to Amartya Sen by Felix Raj, Sampat Mukherjee	2	Chalk and Talk	
	3. Income and urbanization: growth and its impact on resources and environment		2		
	3. Health care		2		
	3.Sustainabl use of forest 3.Sustainable use of water resource		2		
		Total	08		

**Department Name: Geography** 

Name of Faculty: Dr. Raj Kumar Bhattacharya

Paper Name & Code: GEO-G-SEC-B-4/6-04-TH-Sustainable Development

Planned					
Unit / Group / Module / Article	Topics	Reference Books	No of Lecture Planned	Content Delivery Technique	Remarks / Comments
Sustainable Development	4a. Global goals for sustainable development: Domain, conflict,	UNO Sustainable Development Knowledge Platform: sustainabledevelopment.un.org Sustainable Development	4	Chalk and talk	
	4b.Crisis and compromise	Goals <a href="https://sdgs.un.org/goal">https://sdgs.un.org/goal</a>	3	Chalk and talk	
		Total	7		

This theory paper is shared among Smt. Pubali Ghosh, Associate Professor, Dr. Saswati Nayek, Associate Professor, Smt. Prakriti Das, Assistant Professor and Dr. Raj Kumar Bhattacharya, Assistant Professor, Geography Dept, VIC