Choice Based Credit System (CBCS): Syllabus in Geography

Semester- 3
(Marks-275, Credit- 20)

COURSE OPTED	COURSE NAME	CREDIT	MARKS			HOURS/WEEK
			IA	ESE	TOTAL	
CORE COURSE (CC5)	CLIMATOLOGY	6	15	60	75	5-1-0
CORE COURSE (CC6)	STATISTICAL METHODS IN GEOGRAPHY	4	15	40	75	4-0-0
		2		20		0-0-4
CORE COURSE (CC7)	GEOGRAPHY OF INDIA	6	15	60	75	5-1-0
SKILL ENHANNCEMENT (SEC-1)	COMPUTER BASICS AND COMPUTER APPLICATIONS	2	10	40	50	0-0-4

CORE COURSE

Pattern of Setting Question (60 Marks):

- 10 questions to be answered out of 15, each question carries 02 Marks, Total 20 Marks.
- 4 questions to be answered out of 6, each question carries 05 Marks, Total 20 Marks.
- 2 questions to be answered out of 4, each question carries 10 Marks, Total 20 Marks.

Pattern of Setting Questions (40 Marks)[NOT FOR SEC]:

- 5 questions to be answered out of 8, each question carries 02 Marks, Total 10 Marks.
- 2 questions to be answered out of 4, each question carries 05 Marks, each question shall have at least two parts. Total 10 Mark
- 2 questions to be answered out of 4, each question carries 10 Marks, each question shall have at least two parts; Total 20 Marks

Pattern of Setting Questions Practical (20 Marks):

- 2 questions to be answered, each question carries 5 Marks, Totaling 10 Marks;
- Evaluation of Laboratory Note Book/ Field report: 5
- Viva-Voce 5 Marks

❖ **CC-5: Climatology (60 Marks/ 6 Credits)**

Unit	S.N.	Topic	Teacher
Unit 1: Elements of the Atmosphere	1	Nature, composition and layering of the atmosphere,	**BD**
	2	Insolation: controlling factors. Heat budget of the atmosphere.	**BD**
	3	Temperature: horizontal and vertical distribution. Inversion of temperature: types, causesand consequences.	**BD**
	4	Greenhouse effect and importance of ozone layer	**RH**
Unit II	1	Condensation: Processes and forms. Mechanism of	**RD**

Atmospheric Phenomena, Climate Change and Climatic Classification		precipitation: Bergeron-Findeisen theory, collision and coalescence. Forms of precipitation.	
	2	Air mass: Typology, origin, characteristics and modification.	**RD**
	3	Fronts: warm and cold; frontogenesis and frontolysis.	**RD**
	4	Weather: stability and instability; barotropic and baroclinic conditions.	**RD**
	5	Circulation in the atmosphere: Planetary winds, jet stream and monsoons	**RH**
	6	Tropical and mid-latitude cyclones	**RH**
	7	Evidences and causes of climate change	**AB**
	8	Climatic classification after Köppen, Thornthwaite (1948)	**AB**

Reference Books

- Barry R. G. and Carleton A. M., 2001: Synoptic and Dynamic Climatology, Routledge, UK
- Barry R. G. and Chorley R. J., 1998: Atmosphere, Weather and Climate, Routledge, New York
- .Critchfield H. J., 1987: General Climatology, Prentice-Hall of India, New Delhi
- Lutgens F. K., Tarbuck E. J. and Tasa D., 2009: The Atmosphere: An Introduction to Meteorology, Prentice-Hall, Englewood Cliffs, New Jersey.
- Oliver J. E. and Hidore J. J., 2002: Climatology: An Atmospheric Science, Pearson Education, New Delhi. Trewartha G. T. and Horne L. H., 1980: An Introduction to Climate, McGraw

❖ **CC-6- Statistical Methods in Geography (Theory: 40 Marks/ 4 Credits, Practical: 20 Marks/ 2 Credits)**

Unit	S.N.	Topic	Teacher
Theory Unit I	1	Importance and significance of Statistics in Geography. Discrete and continuous data, population and samples, scales of measurement (nominal, ordinal, interval and ratio), sourcesof data	**AB**
	2	Collection of data and formation of statistical tables	**AB**

	3	Sampling: Need, types, and significance and methods of random sampling	**RD**
	4	Distribution: frequency, cumulative frequency	**RD**
Theory Unit II	1	Central tendency: Mean, median, mode, partition values	**RH**
	2	Measures of dispersion range, mean deviation, standard deviation, coefficient of variation	**RH**
	3	Association and correlation: Rank correlation, product moment correlation	**RH**
	4	Linear Regression and time series analysis	**RH**
Practical **A Project File, comprising one exercise each is to be submitted.*	1	Construction of data matrix with each row representing an aerial unit (districts / blocks / mouzas / towns) and corresponding columns of relevant attributes.	**BD**
	2	Based on the above, a frequency table, measures of central tendency and dispersion would be computed and interpreted.	**BD**
	3	Histograms and frequency curve would be prepared on the dataset.	**BD**
	4	Based on of the sample set and using two relevant attributes, a scatter diagram and regression line would be plotted and residual from regression would be mapped with a shortinterpretation.	**RH+RD**

Reference Books

- Berry B. J. L. and Marble D. F. (eds.): Spatial Analysis – A Reader in Geography. Ebdon D., 1977: Statistics in Geography: A Practical Approach.
- Hammond P. and McCullagh P. S., 1978: Quantitative Techniques in Geography: An Introduction, Oxford University Press.
- King L. S., 1969: Statistical Analysis in Geography, Prentice-Hall. Mahmood A., 1977: Statistical Methods in Geographical Studies, Concept.Pal S. K., 1998: Statistics for Geoscientists, Tata McGraw Hill, New Delhi.
- Sarkar, A. (2013) Quantitative geography: techniques and presentations. Orient Black Swan Private Ltd., NewDelhi
- Silk J., 1979: Statistical Concepts in Geography, Allen and Unwin, London. Spiegel M. R.: Statistics, Schaum's Outline Series.
- Yeats M., 1974: An Introduction to Quantitative Analysis in Human Geography, McGraw Hill, New York.

❖ **CC-7: Geography of India (60 Marks/ 6 Credits)**

Unit	S.N.	Topic	Teacher
Unit 1: Geography of India	1	Geology and physiographic divisions	**RD**
	2	Climate, soil and vegetation: Characteristics and classification	**RD**
	3	Population: Distribution, growth, structure and policy	**RH**
	4	Distribution of population by race, caste, religion, language, tribes	**RH**
	5	Agricultural regions, Green revolution and its consequences	**BD**
	6	Mineral and power resources distribution and utilisation of iron ore, coal, petroleum	**BD**
	7	Industrial development since independence.	**AB**
	8	Regionalisation of India: Views of Spate and Bhatt.	**AB**
Unit II Geography of West Bengal	1	Physical perspectives: Physiographic divisions, forest and water resources	**RD**
	2	Population: Growth, distribution and human development	**RH**
	3	Resources: Mining, agriculture and industries	**BD**
	4	Regional Development: Darjeeling Hills and Sundarban	**AB**

Reference Books

- Deshpande C. D., 1992: India: A Regional Interpretation, ICSSR, New Delhi.
- Johnson, B. L. C., ed. 2001. Geographical Dictionary of India.Vision Books, New Delhi.
- Mandal R. B. (ed.), 1990: Patterns of Regional Geography – An Intenational Perspective. Vol. 3 – Indian Perspective.
- Sdyasuk Galina and P Sengupta (1967): Economic Regionalisation of India, Census of India Sharma, T. C. 2003: India - Economic and Commercial Geography. Vikas Publ., New Delhi. Singh R. L., 1971: India: A Regional Geography, National Geographical Society of India.
- Singh, Jagdish 2003: India - A Comprehensive & Systematic Geography, GyanodayaPrakashan, Gorakhpur. Spate O. H. K. and Learmonth A. T. A., 1967: India and Pakistan: A General and Regional Geography, Methuen. Tirtha, Ranjit 2002: Geography of India, RawatPubls., Jaipur & New Delhi

- Pathak, C. R. 2003: Spatial Structure and Processes of Development in India. Regional Science Assoc., Kolkata. Tiwari, R.C. (2007) Geography of India. PrayagPustakBhawan, Allahabad
- Sharma, T.C. (2013) Economic Geography of India. Rawat Publication, Jaipur

❖ **SEC-1: Computer Basics and Computer Applications (40 Marks/ 2 Credits)**

S.N.	Topic	Teacher
1	Numbering Systems; Binary Arithmetic	**AB**
2	Data Computation, Storing and Formatting in Spreadsheets: Computation of Rank, Mean, Median, Mode, Standard Deviation, Moving Averages, Derivation of Correlation, Covariance and regression; Selection of technique and interpretation.	**AB**
3	Preparation of Annoted Diagrams and its interpretation: Scatter diagram and Histogram	**RD**
4	Internet Surfing: Generation and extraction of information	**AB**

**A project file consisting of four exercises on the above themes is to be submitted*

Reference Books

- Bartee, Thomas C. (1977): Digital Computer Fundamental; McGraw Hill.
- Chauhan, S.; Chauhan, A. and Gupta, K. (2006): Fundamental of Computer; Firewall Media.
- Flake, L.J.; McClintock, C.E. and Turner, S. (1989): Fundamental of Computer Education;
- Wordsworth Pub. Co. Leon, A .and Leon,M.(1999): Introduction to Computer, USB Publishers' Distributors Ltd.
- Malvino, A.P. and Leach, D.P. (1981): Digital Principles and Appications; Tata McGraw Hill.
- Mano, Moris M. and Kime, Charles R. (2004): Logic and Computer Design Fundamental; Prentice Hall. Rajaraman, V. (2003): Fundamentals of Computer, Prentice Hall Publisher
- Sarkar, A. and Gupta, S.K (2002) Elements of computer Science, S Chand and Company, New Delhi Blissmer (1996): Working with MS

Word; Houghton Mifflin Co.

- Johnson, Steve (2007): Microsoft Power Point 2007; Pearson Paravia Bruno.
- Leon, A .and Leon,M.(1999): Introduction to Computer, USB Publishers' Distributors Ltd. Leon, A. and Leon, M.(1999): A beginners Guide to Computers, Vikas
- Rajaraman, V. (2008): Computer Primer; Prentice Hall of India Pvt. Ltd.
- Sarkar, A. and Gupta, S.K (2002) Elements of computer Science, S Chand and Company, New Delhi Shepard, Aaron (2007): Perfect Pages; Shepard Publications. Tyson, Herbert L. (2007): Microsoft Word 2007 bible; John Wiley.
- Walkenbach, John (2007): Excel 2007 Bible; John Wiley.