

# Gangadhar Meher University, SAMBALPUR, ODISHA

UNDERGRADUATE PROGRAMME IN GEOGRAPHY  
(Courses effective from Academic Year 2017-18)



SYLLABUS OF COURSES OFFERED IN  
Core Courses, Generic Elective, Ability Enhancement Compulsory Courses & Skill  
Enhancement Course

**DEPARTMENT OF GEOGRAPHY**  
Gangadhar Meher University  
SAMBALPUR, ODISHA

**REGULATIONS OF GENERAL ACADEMIC AND EXAMINATION**  
**MATTERS FOR BA/B.Sc./B.COM/BBA/BSc.IST EXAMINATIONS**  
(THREE YEAR DEGREE COURSE) UNDER CHOICE BASED CREDIT SYSTEM AND  
SEMESTER SYSTEM

(Effective for the students admitted to First year of Degree course during 2015-16 and afterwards)

**CHAPTER-I**

**(REGULATIONS OF GENERAL ACADEMIC MATTERS)**

**1. APPLICATION & COMMENCEMENT:**

- (i) These regulations shall come into force with effect from the academic session 2015-16.

**2. CHOICE-BASED CREDIT SYSTEM (CBCS):**

CBCS is a flexible system of learning that permits students to

1. Learn at their own pace.
2. Choose electives from a wide range of elective courses offered by the University Departments.
3. Adopt an inter-disciplinary approach in learning and
4. Make best use of the expertise of available faculty.

**3. SEMESTER:**

Depending upon its duration, each academic year will be divided into two semesters of 6 months duration. Semesters will be known as either odd semester or even semester. The semester from July to December will be Semesters I, III, V and similarly the Semester from January to June will be Semesters II, IV & VI. A semester shall have minimum of 90 instructional days excluding examination days / Sundays / holidays etc.

**4. COURSE:**

A Course is a set of instructions pertaining to a pre-determined contents (syllabus), delivery mechanism and learning objectives. Every course offered will have three components associated with the teaching-learning process of the course, namely:

- (i) Lecture – symbolized as L;
- (ii) Tutorial – symbolized as T; and
- (iii) Practical – symbolized as P.

In G.M. University, UG programmes have a minimum of 21 courses.

**5. CREDIT:**

Each course is rated in terms of credits or credit hours. Credit is a kind of weightage given to the contact hours to teach the prescribed syllabus, which is in a modular form. Normally one credit is allocated to 10 contact hours.

**Mechanics of credit calculation:**

As per G.M. University standard, 1 credit = 10 hours of lectures / contact hours. The contact hours will include all the modes of teaching like lectures / tutorials / laboratory work / field work or other forms. In determining the number of hours of instruction required for a course involving laboratory / field work, 2 hours of laboratory / field work is generally considered equivalent to 1 hour of lecture. In these regulations one credit means one hour of teaching works or two hours of practical works per week.

## **6. GRADE LETTER:**

The Grade letter is an index to indicate the performance of a student in a particular course / paper. It is the transformation of actual marks secured by a student in a course / paper. The Grade letters are O, A+, A, B+, B, C, P, F. There is a range of marks for each grade letter.

## **7. GRADE POINT:**

Grade point is an integer indicating the numerical equivalent of the letter grade / the weightage allotted to each grade letter depending on range of marks awarded in a course / paper.

## **8. CREDIT POINT (P):**

Credit point is the value obtained by multiplying in grade point (G) by the credit (C):  $P = G \times C$ .

## **9. SEMESTER GRADE POINT AVERAGE (SGPA):**

SGPA is the value obtained by dividing the sum of credit points (P) earned by a student in various courses taken in a semester by the total number of credits earned by the student in that semester. SGPA shall be rounded off to two decimal places.

## **10. CUMULATIVE GRADE POINT AVERAGE (CGPA):**

CGPA is the value obtained by dividing the sum of credit points in all the courses earned by a student for the entire programme, by the total number of credits. CGPA shall be rounded off to two decimal places. CGPA indicates the comprehensive academic performance of a student in a programme.

An overall letter grade (Cumulative Grade) for the entire programme shall be awarded to a student depending on his / her CGPA.

## **11. COURSE STRUCTURE:**

- (a) **COURSE:** A course is a component / a paper of a programme. A course may be designed to involve lectures / tutorials / laboratory work / seminar / project work / practical training / report writing / viva voce etc. or a combination of these, to meet effectively the teaching and learning needs and the credits may be assigned suitably.

(b) **TYPES OF COURSES:**

- (i) Core Courses (14x6=84 credits)

Core courses comprise a set of at least fourteen papers that are identified as compulsory for the students registered for the UG degree in a particular subject. Core courses shall be spread over all the semesters.

- (ii) Ability Enhancement Compulsory Course (04 credits)

The Ability Enhancement Course (AE) Courses may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill Enhancement Courses (SEC). "AECC" courses are the courses based upon the content that leads to Knowledge enhancement; i. Environmental Science and ii. English / MIL Communication. These are mandatory for all disciplines.

(iii) Skill Enhancement Course (SEC) (04 credits)

SEC courses are value-based and / or skill-based and are aimed at providing hands-on-training, competencies, skills, etc. These courses may be chosen from a pool of courses designed to provide value-based and / or skill-based knowledge.

(iv) Elective Courses: 48 credits (24+24)

Elective Course: A course that can be chosen from a number of options other than the core and compulsory courses is known as elective course. An elective may be “Generic Elective” focusing on those courses which add generic proficiency to the student. An elective may be “Discipline Centric” or may be chosen from the main discipline / subject of study called Discipline Specific Elective. Such elective may also include project work / dissertation. It is considered as a special course involving the application of knowledge in solving / analyzing / exploring a real life situation / difficult problem.

The Three year Degree course leading to the Bachelors Degree in Arts/Science/Commerce/BBA/BSc.IST shall be spread over a period of six semesters in three academic years with the following course structure.

Semester	Core Course (6 credits per paper)	Ability Enhancement Compulsory Course (2 credits per paper)	Skill Enhancement Course (2 credits per paper)	Discipline Specific Elective (6 credits per paper)	Generic Elective (6 credits per paper)
I (350 Marks)	CC-I CC-II	AECC-I	-	-	GE-I
II (350 Marks)	CC-III CC-IV	AECC-II	-	-	GE-II
III (450 Marks)	CC-V CC-VI CC-VII	-	SEC-I	-	GE-III
IV (450 Marks)	CC-VIII CC-IX CC-X	-	SEC-II	-	GE-IV
V (400 Marks)	CC-XI CC-XII	-	-	DSE-I DSE-II	-
VI (400 Marks)	CC-XIII CC-XIV	-	-	DSE-III DSE-IV	-

## **CHAPTER – II**

### **(REGULATION ON EXAMINATION MATTERS)**

#### **1. The Examinations**

1.1.(a) A candidate for the Bachelor's Degree in Arts/Science/Commerce/BBA/BSc.IST shall be required to pass each of the following examinations.

- |                    |                  |
|--------------------|------------------|
| (i) Semester-I     | (ii) Semester-II |
| (iii) Semester-III | (iv) Semester-IV |
| (v) Semester-V     | (vi) Semester-VI |

Each of the semester examination includes one Mid-Term and one End Term examination.

1.1.(b) Each student has to register himself / herself within schedule date to be eligible to appear the examination. Unless a student registers himself / herself by filling up examination forms and pays the requisite fees for Semester-I, he/she will not be eligible to sit for semester-II examination. Similarly, he/she will not be eligible to take the subsequent semesters unless he/she registers for the previous semester.

1.1.(c) A student has to clear all semester examinations within a maximum period of 05 years.

#### **1.2 Examination Calendar**

The broad format of the examination calendar for UG classes shall be as follows:

- |  |                         |
|--|-------------------------|
| (a) Mid term examination of odd semesters  | ... September           |
| (b) End Term examination of odd semesters  | ... November – December |
| (c) Mid term examination of even Semesters | ... February            |
| (d) End Term examination of even semesters | ... March – April       |

The detail programme of end term examination shall be notified one month before the commencement of examinations.

#### **1.3. Mid Term examination**

In each semester there shall be one Mid Term examination of one hour / 60 minutes duration irrespective of marks in each paper having theory component. Out of the total marks of a paper, 20% of marks are earmarked for midterm examination.

#### **1.4 End Term Examination**

At the end of each semester, there shall be one examination of each paper called End Term examination. It shall cover 80% of the total marks of a paper. A student fulfilling the following conditions is eligible to appear the End Term examination.

- i. A student shall pay the prescribed examination fees and fill up the prescribed form meant for the examination as per the notification issued by Examination Section (General). No form fill up is allowed before seven days of the commencement of the End-Term examination.
- ii. The minimum number of lectures, practicals, seminars, which a student shall be required to attend before being eligible to take any Semester Examination shall not be less than 75% of the total number of lectures, practicals, seminars taken separately during the semester period.
- iii. Provided that in exceptional cases the authority may condone the shortage of attendance to the extent of 15%.
- iv. Provided further that the authority may condone the shortage of attendance to the extent of 10% over and above 15% in respect of students who represented the college or the state in any National / State Level: Camp, NCC, games or sports during the semester period under reference subject to prior approval and subsequent production of authenticated certificate of participation.

#### **1.5.(a) Mode of Examination**

The duration of examination shall be as follows:

Examination	Total marks	Duration
Theory paper	40 Marks	2 hours
	60/80 Marks	3 hours
Practical papers / Project Papers	25 Marks	3 hours
	50/100 marks	6 hours

#### **1.5.(b) Mode of question papers**

- (i) All examinations except Viva-voce and Project work shall be conducted by means of written paper (Printed, written / typed in English). The papers in Modern Indian Languages shall be set and answered in the respective languages as mentioned in the syllabus.
- (ii) Questions for a paper shall be set covering the total course of that paper either unit wise giving options from each unit unless specified otherwise in the syllabus.

#### **1.5 (c) Results of examinations**

The candidates shall have to appear and secure minimum pass grade in all the paper of a semester examination to be declared as pass. The following 10 – point grading system and corresponding letter grades be implemented in awarding grades and CGPA under CBCS system.

#### **1.6 Award of Grade**

The grade awarded to the student in any particular course / paper shall be based on his / her performance in all the tests conducted in a semester for that course / paper. The

percentage of marks secured by the students in a particular course / paper shall be converted to a grade and grade point for that course / paper in the manner specified in the following table after conversion in to 100 marks.

% of Marks	Grade	Grade Letter	Grade Point
> = 90 – 100	Outstanding	O	10.0
> = 80 – < 90	Excellent	A+	9.0
> = 70 – < 80	Very good	A	8.0
> = 60 – < 70	Good	B+	7.0
> = 50 – < 60	Above average	B	6.0
> = 40 – < 50	Average	C	5.0
> = 30 – < 40	Pass	P	4.0
< 30	Fail	F	0.0
	Absent	S	0.0
	Malpractice	M	0.0

**N.B.:** Grade ‘P’ (30% of marks) shall be the pass grade for Theory and Grade ‘C’ (40% of marks) shall be the pass grade for Practical / Project work / Dissertation.

## 1.7 Result

**1.7(a)** In order to pass a course / paper, a candidate has to secure a minimum of Grade Point 4.0 in that course / paper with Grade ‘P’ (30% of marks) in Theory and Grade ‘C’ (40% of marks) in Practical / Project work / Dissertation failing which the candidate will be marked ‘F’ in that course / paper with the Grade Point of 0.0 (below 30 marks) irrespective of the marks secured in that course / paper.

A candidate obtaining Grade ‘F’ shall be considered as fail and will be required to reappear the course(s) / paper(s) as back paper. The back paper examination shall be held with the normal end semester examination and the students with backlogs shall clear their backlog course(s) / paper(s) along with regular students of lower semesters in the subsequent year within a period of 05 years from the date of admission and with the current syllabus after two consecutive chances.

**1.7(b)** In order to clear a semester examination, a candidate is required to pass each credit course / paper of that semester and must secure a minimum Semester Grade Point Average (SGPA) of 4.0. The semester result shall be indicated as detail below:-

**A.** P (Passed or Cleared) indicating that:

- The candidate has cleared every registered course / paper of odd/even semester of the academic year with a minimum Grade Point (GP) of 4.0 in each paper / component of a paper.

He / She has secured SGPA / CGPA of 4.0 or more.

**B.** NC (Not Cleared) indicating that:

The candidate is eligible for promotion with backlogs to next higher semester if he / she has registered for all the subjects of any semester.

**C.** 'X' (Not eligible for promotion) indicating that:

The candidate is not eligible for promotion to next higher level, when as he / she has not registered / filled up the form for the different subjects of a semester.

### **Computation of SGPA and CGPA**

The UGC recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)

- i.** The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e.

$$SGPA (S_i) = \frac{\sum(C_i \times G_i)}{\sum C_i}$$

Where  $C_i$  is the number of credits of  $i$  th course and  $G_i$  is the grade point scored by the student in the  $i$  th course.

- ii.** The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, i.e.

$$CGPA = \frac{\sum(C_i \times S_i)}{\sum C_i}$$

Where  $S_i$  is the SGPA of the  $i$ th semester and  $C_i$  the total number of credits in that semester.

- iii.** The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

### **Illustration of Computation of SGPA and CGPA and Format for Transcripts**

- i.** Computation of SGPA and CGPA



### Illustration for SGPA

Course	Credit	Grade letter	Grade point	Credit point
Course 1	3	A	8	3X8=24
Course 2	4	B+	7	4X7=28
Course 3	3	B	6	3X6=18
Course 4	3	O	10	3X10=30
Course 5	3	C	5	3X5=15
Course 6	4	B	6	4X6 =24
	20			139

Thus, SGPA =  $139/20=6.95$

### Illustration for CGPA

Semester-I	Semester-II	Semester-III	Semester-IV	Semester-V	Semester-VI
Credit-20 SGPA:6.9	Credit-22 SGPA:7.8	Credit-25 SGPA:5.6	Credit-26 SGPA:6.0	Credit-26 SGPA:6.3	Credit-25 SGPA:8.0
Thus, CGPA= $\frac{20 \times 6.9 + 22 \times 7.8 + 25 \times 5.6 + 26 \times 6.0 + 26 \times 6.3 + 25 \times 8.0}{144}$					=6.73

**1.7(c)** In order to pass a programme, a candidate must secure a minimum CGPA of 4.5. A candidate securing CGPA of less than 4.5 shall be declared as fail.

The conversion of CGPA to percentage of marks =  $(CGPA - 0.5) \times 10$ .

The conversion of CGPA into Grade Letter shall be made on the basis of percentage of marks in the manner specified in the following table.

CGPA / OGPA	Grade Letter	Grade	% of Marks after conversion	Classification of Honours
$\geq 9.5$	O	Outstanding	$\geq 90$	First Class Honours
$\geq 8.5 - < 9.5$	A+	Excellent	$\geq 80 - < 90$	
$\geq 7.5 - < 8.5$	A	Very good	$\geq 70 - < 80$	
$\geq 6.5 - < 7.5$	B+	Good	$\geq 60 - < 70$	
$\geq 5.5 - < 6.5$	B	Above average	$\geq 50 - < 60$	Second Class Honours
$\geq 5.0 - < 5.5$	C	Average	$\geq 45 - < 50$	
$\geq 4.5 - < 5.0$	P	Pass	$\geq 40 - < 45$	Pass without Honours
Below 4.5	F	Fail	$< 40$	Fail

### 1.8 Promotion to the next semester

A student shall be promoted to the next higher semester when he/she has

appeared and passed in all the courses of the previous semester examinations. However, a student failing to appear / pass semester examination in few or all papers due to some reasons may be admitted to the next semester, provided that such a student shall produce sufficient proof in favour of his/her reason for not being able to appear / pass in some or all papers of the semester examination and has taken readmission in the year. Such students shall be considered as absent / failed candidate and will required to appear the repeat / back paper examination in the next year.

### **1.9 Repeat / Back Paper Examination**

A student who remains absent or failed to secure 30% of marks / SGPA of 4.0 in aggregate has to take the repeat examination. He/she shall repeat all the theory and practical papers of that semester within a period of 5 years from the date of first registration. However, a student who secures more than 30% of marks / SGPA of 4.0 in aggregate but failed in one / some papers, he/she has to take the Back paper examination in the failed papers only. If the student is unable to clear the back papers in the next two consecutive chances, he/she has to appear the repeat examination of all papers in the third and subsequent chances as per the current syllabus and the marks secured in the previous examinations shall stand cancelled.

During back paper examinations, the higher marks of the papers shall be retained at the time of computation of result. The student passing in all papers in terms of grade point but failing in grade point average, then he / she has to appear the back paper examinations in those papers in which he / she has secured less than the required average grade point to pass. Such students shall have to apply to the Head of the Department in plain paper before one week of the form fill up and also filling the form in due date of the ensuing semester examination by depositing the fees as prescribed by the university. The repeat / back paper examination shall be held with the normal end semester examination.

A student appearing in repeat / back paper examination shall not be awarded distinction even if he/she subsequently fulfils the conditions of distinction and will not be included in the merit list. The final result of the candidate will be determined after taking all the subject wise marks and hard case rule into consideration. Candidates taking repeat / improvement examinations shall not be considered for the merit list and it shall be reflected in the provisional certificate- cum mark sheet but not in the final Degree certificate.

### **1.10 Improvement Examination**

After the publication of final result the student getting 2<sup>nd</sup> Class (Honours) or Pass without Honours may be allowed to improve his/her performance in the next two year immediately from the year of publication of result. He/she shall be allowed to improve in Honours paper only. However he / she has to fill up the form of all the Honours papers of odd semester (I/III/V) and even semester (II/IV/VI). In such case, the highest mark secured in each paper shall be considered for computation of the mark.

## **1.11 Discipline in the examination**

**1.11(a)** The students are allowed to enter the examination hall half an hour before the commencement of examination. A student arriving in the examination hall / room fifteen minutes after the commencement of the examination shall not be ordinarily allowed to sit for the examination. No examinee shall be allowed to go out of the examination hall within one hour of the commencement of examination.

**1.11(b)** The students are allowed to enter the examination hall only with a valid admit card and Identity card. Mobile phones and any other electronic gadgets are strictly prohibited in the examination hall. The possession of such things in the examination hall shall be treated as malpractice.

**1.11(c)** The possession of unauthorized materials and using it / copying from the scripts of other students / from any other source, sharing his/her answer scripts with other, creating disturbance or acting in a manner, so as to create inconvenience for the other students / invigilators inside the examination hall shall be treated as adoption of unfair means or malpractice.

In case of adoption of unfair means by an examinee in the examination hall / outside, the invigilator shall immediately report to the Centre Superintendent in writing along with the incriminating material recovered from the examinee signed by both the examinee and invigilator. The Centre Superintendent shall refer the matter to the Controller of Examinations for necessary disciplinary action as per the rules and regulations of the University.

## **1.12 Issue of Grade sheet, Provisional Certificate, Award of Degree & Gold Medals.**

After the publication of the result of Semester examination, the Controller of Examinations shall issue the grade sheet of each semester as per the prescribed format (Appendix-I) and provisional certificate cum grade sheet after the final semester examination as per the prescribed format (Appendix-II) to the candidates against a prescribed fee collected at the time admission / filling of form. A degree certificate under the official seal of the university and signed by Vice-Chancellor as per the prescribed format (Appendix-III) shall be issued / given to the successful students of a particular course at the convocation or in-absentia on submission of application and fee as prescribed.

For award of gold medals, the University shall form a committee. The best graduate shall be decided from amongst the toppers of each Honours. In case of equality of CGPA, the SGPA of last semester examination shall be considered. The students who have failed / remained absent / improved their marks by repetition or improvement shall not be eligible for University rank or gold medal.

**Registrar**  
**G.M. University, Sambalpur**

**PROPOSED SCHEME FOR CHOICE BASED CREDIT SYSTEM IN  
BA HONOURS IN GEOGRAPHY**

Semester		CORE COURSE (14)	Ability Enhancement Compulsory Course (AECC) (2)	Ability Enhancement Elective Course (AEEC) (2) (Skill Based)	Elective: Discipline Specific DSE (4)	Elective: Generic (GE) (4)
I	CC1	Geomorphology	English Communication / Odia/ Hindi			GE-I Geography of India
	CCII	Cartographic Techniques				
II	CCIII	Human Geography	Environmental Studies			GE-II Geography of Odisha
	CCIV	Thematic Cartography				
III	CCV	Climatology		SEC -I Research Method		GE-III Climatology
	CCVI	Statistical Methods in Geography				
	CCVII	Fields Woks and Research Methodology				
IV	CCVIII	Evolution of Geographical Thought		SEC -II Communicative English and English Writing		GE- IV Human Geography
	CCIX	Economic Geography				
	CCX	Environmental Geography				
V	CCXI	Regional Planning and Development			DSE-I Population Geography	
	CCXII	Remote Sensing & GIS			DSE -II Resource Geography	
VI	CCXIII	Geography of India			DSE -III Urban Geography	
	CC XIV	Oceanography			DSE - IV Dissertation/ Project Work	

## Course Structure for B.A. Geography (Honours)

Semester	Course Name	Course Offered	Title Of Paper	Credits	Marks
<b>I</b> 4 Papers 350 marks 20 Credits	AECC	Ability Enhancement Compulsory Course-I	English Communication/Odia/ Hindi	2	50(10+40)
	Generic Elective	Generic Elective -1	Geography of India	4	75 (15+60)
		Generic Elective -1 Practical	Project	2	25
	Core Course	Core Course-I	Geomorphology	4	75 (15+60)
		Core Course-I Practical	Project	2	25
		Core Course-II	Cartographic Techniques	4	75 (15+60)
		Core Course-II Practical	Practical	2	25
<b>II</b> 4 Papers 350 marks 20 Credits	AECC	Ability Enhancement Compulsory Course II	Environmental Studies	2	50 (10+40)
	Generic Elective	Generic Elective -II	Geography of Odisha	4	75 (15+60)
		Generic Elective -II Practical	Project	2	25
	Core Course	Core Course-III	Human Geography	4	75 (15+60)
		Core Course-III Practical	Project	2	25
		Core Course-IV	Thematic Cartography	4	75 (15+60)
		Core Course-IV Practical	Practical	2	25
<b>III</b> 5 paper 450 Marks 26 Credits	SEC	Skill Enhancement Course -I	Research Method	2	50 (10+40)
	Generic Elective	Generic Elective - III	Climatology	4	75 (15+60)
		Generic Elective -III Practical	Project	2	25
	Core Course	Core Course-V	Climatology	4	75 (15+60)
		Core Course-V Practical	Practical	2	25
		Core Course-VI	Statistical Methods in Geography	4	75 (15+60)
		Core Course-VI Practical	Practical	2	25
Core Course-VII		Fields Woks and Research Methodology	4	75 (15+60)	
Core Course-VII Practical	Project	2	25		
<b>IV</b> 5 Papers 450 Marks 26 Credits	SEC	Skill Enhancement Course -II	Communicative English and English Writing	2	50 (10+40)
	Generic Elective	Generic Elective - IV	Human Geography	4	75 (15+60)
		Generic Elective -IV Practical	Project	2	25
	Core Course	Core Course-VIII	Evolution of Geographical Thought	4	75 (15+60)
		Course-VIII Practical	Project	2	25
		Core Course-IX	Economic Geography	4	75 (15+60)
		Core Course-IX Practical	Project	2	25
Core Course-X		Environmental Geography	4	75 (15+60)	
Course-X Practical	Project	2	25		

Semester	Course Name	Course Offered	Title Of Paper	Credits	Marks
<b>V</b> <b>4 Paper</b> <b>400 marks</b> <b>24 credits</b>	<b>DSE</b>	<b>Discipline Specific Elective I</b>	<b>Population Geography</b>	4	<b>75 (15+60)</b>
		<b>Discipline Specific Elective -I Practical</b>	<b>Project</b>	2	<b>25</b>
		<b>Discipline Specific Elective -II</b>	<b>Resource Geography</b>	4	<b>75 (15+60)</b>
		<b>Discipline Specific Elective- II Practical</b>	<b>Project</b>	2	<b>25</b>
	<b>Core Course</b>	<b>Core Course-XI</b>	<b>Regional Planning and Development</b>	4	<b>75 (15+60)</b>
		<b>Core Course-XI Practical</b>	<b>Project</b>	2	<b>25</b>
		<b>Core Course-XII</b>	<b>Remote Sensing &amp; GIS</b>	4	<b>75 (15+60)</b>
		<b>Core Course-XII Practical</b>	<b>Project</b>	2	<b>25</b>
<b>VI</b> <b>4 paper</b> <b>400 marks</b> <b>24 credits</b>	<b>DSE</b>	<b>Discipline Specific Elective -III</b>	<b>Urban Geography</b>	4	<b>75 (15+60)</b>
		<b>Discipline Specific Elective - III</b>	<b>Project</b>	2	<b>25</b>
		<b>Discipline Specific Elective-IV</b>	<b>Dissertation / Project Work</b>	6	<b>100</b>
	<b>Core Course</b>	<b>Core Course-XIII</b>	<b>Geography of India</b>	4	<b>75 (15+60)</b>
		<b>Core Course-XIII Practical</b>	<b>Project</b>	2	<b>25</b>
		<b>Core Course-XIV</b>	<b>Oceanography</b>	4	<b>75 (15+60)</b>
		<b>Core Course-XIV Practical</b>	<b>Project</b>	2	<b>25</b>
<b>Total</b>				<b>140</b>	<b>2400</b>

## SEMESTER-I

### Ability Enhancement Compulsory Course (AECC -I): English Communication

Credits – 2, Full marks 50 (Mid Term 10 + End Term 40)

(Unit wise question pattern, answer one question from each unit)

This course aims at enhancing the English language proficiency of undergraduate students in humanity, science and commerce streams to prepare them for the academic, social and professional expectations during and after the course. The course will help develop academic and social English competencies in speaking, listening, pronunciation, reading and writing, grammar and usage, vocabulary, syntax, and rhetorical patterns. Students, at the end of the course, should be able to use English appropriately and effectively for further studies or for work where English is used as the language of communication.

#### Unit I: Reading Comprehension

- Locate and remember the most important points in the reading
- Interpret and evaluate events, ideas, and information
- Read “between the lines” to understand underlying meanings
- Connect information to what they already know

#### Book Prescribed

*Vistas and Visions: An Anthology of Prose and Poetry.* Texts to be studied

#### PROSE

- Playing the English Gentleman (M.K. Gandhi)
- The Need for Excellence (N.R. Narayana Murthy)
- The Last Leaf (O. Henry)

#### POETRY

- One Day I Wrote Her Name (Edmund Spenser)
- Miracles (Walt Whitman)
- The Felling of the Banyan Tree (DilipChitre)

#### Unit II: Writing

1. Expanding an Idea
2. Writing a Memo
3. Report Writing
4. Writing a Business Letter
5. Letters to the Editor
6. CV & Resume Writing
7. Covering Letter
8. Writing Formal Email
9. Elements of Story Writing
10. Note Making

#### Unit III: Language functions in listening and conversation

1. Discussion on a given topic in pairs
2. Speaking on a given topic individually  
(Practice to be given using speaking activities from the prescribed textbooks)

## **Grammar and Usage**

1. Simple and Compound Sentences
2. Complex Sentences
3. Noun Clause
4. Adjective Clause
5. Adverb Clause
6. The Conditionals in English
7. Words and their features
8. Phrasal Verbs
9. Collocation
10. Using Modals
11. Use of Passives
12. Use of Prepositions
13. Subject-verb Agreement
14. Sentence as a system
15. Common Errors in English Usage

## **Examination pattern**

Each reading and writing question will invite a 200 word response.

Language function questions set in context will carry 01 mark per response. There will be 15 bit questions.

Midterm test 10 marks

End Term Total 40 marks

Unit I- Reading: 05 questions (03x 05 qns= 15 marks)

Unit II- Writing: 03 questions (05 x 03 qns= 15 marks)

Unit III- Grammar & usage: 10 qns (01x 10 qns = 10 marks )

Grammar questions must be set in contexts; not as isolated sentences as used for practice in the prescribed textbook.

## **All grammar and writing activities in the textbook**

**‘Vistas and Visions: An Anthology of Prose and Poetry’** (Ed.) Kalyani Samantray, Himansu S. Mohapatra, Jatindra K. Nayak, Gopa Ranjan Mishra, Arun Kumar Mohanty. (Orient Black Swan Publisher)



**Ability Enhancement Compulsory Course (AECC - I): ODIA**  
**Credits – 2, Full marks 50 (Mid Term 10 + End Term 40)**  
**(Unit wise question pattern, answer one question from each unit)**

ପ୍ରଥମ ଏକକ : କବିତା : ଭକ୍ତି - ଗଙ୍ଗାଧର ମେହେର

ଗ୍ରାମପଥ - ବିନୋଦ ଚନ୍ଦ୍ର ନାୟକ

ଦ୍ୱିତୀୟ ଏକକ : ଗଳ୍ପ : ମାଗୁଣିର ଶଗଡ଼ - ଗୋଦାବରୀଶ ମହାପାତ୍ର

ଗୋପପୁର - ରାମଚନ୍ଦ୍ର ବେହେରା

ତୃତୀୟ ଏକକ : ପ୍ରବନ୍ଧ : ଜଳଭୂମି - କୃଷ୍ଣଚନ୍ଦ୍ର ପାଣିଗ୍ରାହୀ

ଆଧୁନିକ - ହରେକୃଷ୍ଣ ମହତାବ

ଚତୁର୍ଥ ଏକକ : ପ୍ରବନ୍ଧ ରଚନା, ପତ୍ରଲିଖନ, ସମ୍ବାଦଲିଖନ

ପଞ୍ଚମ ଏକକ : ବ୍ୟାକରଣ – ଭ୍ରମ ସଂଶୋଧନ, ବିପରିତାର୍ଥବୋଧକ ଶବ୍ଦ, ସମୋଚ୍ଚାରିତ ଭିନ୍ନାର୍ଥବୋଧକ ଶବ୍ଦ

ଆନ୍ତଃପରୀକ୍ଷା ପାଇଁ ୧୦ ମାର୍କ ପ୍ରଶ୍ନ ପଡ଼ିବ । (୧ x ୧୦ = ୧୦)

ବିଶ୍ୱବିଦ୍ୟାଳୟସ୍ତରୀୟ ମୁଖ୍ୟ ପରୀକ୍ଷାରେ ନିମ୍ନମତେ ପ୍ରଶ୍ନ ପଡ଼ିବ:

ପ୍ରଥମ ଏକକରୁ ଚତୁର୍ଥ ଏକକ ପର୍ଯ୍ୟନ୍ତ ପ୍ରତ୍ୟେକ ଏକକରୁ ୨ଟି ଲେଖାଏଁ ପ୍ରଶ୍ନାନ ପଡ଼ିବ। ବିଦ୍ୟାର୍ଥୀ ପ୍ରତ୍ୟେକ

ଏକକରୁ ଗୋଟିଏ ଲେଖାଏଁ ପ୍ରଶ୍ନ ର ଉତ୍ତର ଦେବେ । (୪ x ୮ = ୩୨)

ପଞ୍ଚମ ଏକକରୁ ୧୫ ଟି ଅତି ସଂକ୍ଷିପ୍ତ ପ୍ରଶ୍ନ ପଡ଼ିବ । ବିଦ୍ୟାର୍ଥୀ ନିର୍ଦ୍ଦେଶ ଅନୁଯାୟୀ ୮ ଟି ପ୍ରଶ୍ନର ଉତ୍ତର ଦେବେ ।

(୮x୧=୮)

**ଗ୍ରନ୍ଥ ସୂଚୀ**

୧. କବିତାଶ୍ରୀ - ସଂ. - କୃଷ୍ଣଚରଣ ବେହେରା

୨. ଗଳ୍ପ ଦିଗନ୍ତ - ସଂ. - ସୁରେନ୍ଦ୍ର ନାଥ ଦାସ

୩. ଭାଷଣ କଳା ଓ ଅନ୍ୟାନ୍ୟ ପ୍ରସଙ୍ଗ - ଡ. କୃଷ୍ଣଚନ୍ଦ୍ର ପ୍ରଧାନ

୪. ପ୍ରବନ୍ଧ ଗୌରବ - ସଂ.- ପ୍ର. କୃଷ୍ଣଚନ୍ଦ୍ର ପ୍ରଧାନ

୫. ସାରସ୍ୱତ ପ୍ରବନ୍ଧ ପତ୍ରମାଳା -

୬. ବିଶ୍ୱବିଦ୍ୟାଳୟ ପ୍ରବନ୍ଧମାଳା - ପ୍ର. କୃଷ୍ଣଚନ୍ଦ୍ର ପ୍ରଧାନ

୭. ସର୍ବସାର ବ୍ୟାକରଣ - ଶ୍ରୀଧର ଦାସ ଓ ନାରାୟଣ ମହାପାତ୍ର

୮. ସାରସ୍ୱତ ବ୍ୟାବହାରିକ ବ୍ୟାକରଣ - ଡ. କୃଷ୍ଣଚନ୍ଦ୍ର ପ୍ରଧାନ ଓ ସାଥୀ

## Ability Enhancement Compulsory Course (AECC - I): HINDI

Credits – 2, Full marks 50 (Mid Term 10 + End Term 40)

(Unit wise question pattern, answer one question from each unit)

### हिन्दी भाषा, ब्याकरण एवं रचना

#### Unit I: हिन्दी के विविध रूप

- (क) राजभाषा, संचारभाषा (श्रव्या माध्यम - दृश्य) (8)
- (ख) सरकारी पत्र लेखन (ब्याबहरिक पक्ष) नमूना (8)

#### Unit II: अपठित गद्यांश (8)

#### Unit III: अशुद्धि लेखन

- (क) शब्द शुद्धिकरण (4)
- (ख) वाक्य शुद्धिकरण (4)

#### Unit IV: शब्द ज्ञान

- (क) पर्याय वाची (4)
- (ख) अनेक शब्द के लिए एक शब्द (4)

#### Unit V: प्रशासनिक शब्दावली

- (क) अँग्रेजी से हिन्दी (4)
- (ख) हिन्दी से अँग्रेजी (4)

Unit I: यूनिट एक (क) विभाग से एक प्रश्न एवं (ख) विभाग से एक प्रश्न पूछे जाएंगे ।  
एक का उत्तर लिखना होगा । (8)

Unit II: एक अपठित गद्यांश दिया जाएगा । जिनमें से चार प्रश्न पूछे जाएंगे । चारों प्रश्नों का उत्तर देना अनिवार्य होगा । (8)

Unit III: (क) छः शब्द शुद्धिकरण के लिए दिये जाएंगे । चार का उत्तर लिखना होगा । (4)  
(ख) छः वाक्य शुद्धिकरण के लिए दिये जाएंगे । चार का उत्तर लिखना होगा । (4)

Unit IV: (क) छः पर्यायवाची शब्द दिये जाएंगे , जिनमें से चार शब्दों का पर्यायवाची लिखना होगा । (4)  
(ख) छः अनेक शब्दों के लिए एक शब्द दिये जाएंगे , जिनमें से चार का उत्तर लिखना होगा । (4)

Unit V: (क) छः अँग्रेजी शब्द दिये जाएंगे , जिनमें से चार का हिन्दी रूप लिखना होगा । (4)  
(ख) छः हिन्दी शब्द दिये जाएंगे , जिनमें से चार का अँग्रेजी प्रतिरूप लिखना होगा । (4)

## **Geography GE I: Geography of India**

**(Credits: Theory-04, Practicals-02)**

**Full Marks: 75 (Midterm – 15+ End term – 60)**

**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Physical: Physiographic Divisions, soil and vegetation, climate (characteristics and classification)
- Unit II:** Population: Distribution and growth, Structure
- Unit III:** Economic: Mineral and power resources distribution and utilisation of iron ore, coal, petroleum, gas; agricultural production and distribution of rice and wheat, industrial development: automobile and Information technology
- Unit IV:** Social: Distribution of population by race, caste, religion, language, tribes and their correlates
- Unit V:** Transport in India: Road, Rail and Airways

### **Practical**

**Credits – 2, Full Marks – 25,**

**Project : Submission of Project report on any topic from the course**

### **Reading List:**

1. Deshpand C. D., 1992: India: A Regional Interpretation, ICSSR, New Delhi
2. Johnson, B. L.C., ed. 2001. Geographical Dictionary of India, Vision Books, New Delhi
3. Mandal R. B. (ed.), 1990: Patterns of Regional Geography- An International Perspective, Vol. 3 Indian Perspective.
4. Sdyasuk Galina and P. Sengupta (1967): Economic Regionalisation of India, Census of India

**Geography CC I: Geomorphology**  
**(Credits: Theory-04, Practicals-02)**  
**Full Marks: 75 (Midterm – 15+ End term – 60)**  
**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Geomorphology: Meaning, Nature & Scope, Field of Geomorphology, History of Development , Recent trends
- Unit II:** Earth: Interior Structure and Isostasy, Rocks-Types
- Unit III:** Earth Movements: Plate Tectonics, Types of Folds and Faults, Earthquakes and Volcanoes.
- Unit IV:** Geomorphic Processes: Weathering, Mass Wasting, Cycle of Erosion (Davis and Penck).
- Unit V:** Evolution of Landforms: (Erosional and Depositional) : Fluvial, Karst, Aeolian, Glacial and Coastal

**Project :**  
**Credits – 2, Full Marks – 25,**

**Project : Submission of Project report on any topic from the course**

**Reading List:**

1. Bloom A. L., 2003: Geomorphology: A Systematic Analysis of Late Cenozoic Landforms, Prentice - Hall of India, New Delhi
2. Bridges E.M., 1990, World Geomorphology, Cambridge University Press, Cambridge.
3. Christopherson, Robert W., (2011), Geosystems: An Introduction to Physical Geography, 8 Ed. Macmillan Publishing Company.
4. Knighton A. D. , 1984: Fluvial Forms and Processes, Edward Arnold Publishers, London

**Geography CC II: Cartographic Techniques**  
(Credits: Theory-04, Practicals-02)  
Full Marks: 75 (Midterm – 15+ End term – 60)  
(Unit Wise question pattern- Answer one question from each Unit)

**Unit I: Cartography-Nature and scope**

- (a) Scientific bases of Cartography
- (b) Cartography as a science of human communication
- (c) Concept of representation
- (d) Branches of Cartography

**Unit II: Scales - concept and application**

- (a) Graphical construction of plain scale
- (b) Graphical construction of Diagonal Scale
- (c) Graphical construction of Comparative Scale

**Unit III: Map Projections**

Classification, Properties and Uses; Graphical Construction of Polar Zenithal Stereographic, Bonne's and Mercator's Projections, and reference to Universal Transverse Mercator (UTM) Projection.

**Unit IV: Topographical Map**

- (a) Methods and techniques to interpret the mountain area
- (b) Types of cross section to represent topography
- (c) Construction of block diagram to represent topographical features

**Unit V: Slope Analysis**

- (a) Slope defined and methods of determination of slope (Wentworth's method)
- (b) Utility of slope analysis in topographical study.

**Practical Record:**  
**Credits – 2, Full Marks – 25,**

A Project File in pencil, comprising one exercise *each*, on scale, map projection, interpretation of topographic sheet and slope analysis.

Record and Viva-Voce carries 10% of marks

**Reading List:**

1. Gupta K. K. and Tyagi, V. C., 1992: Working with Map, Survey of India, DST, New Delhi.
2. Mishra R. P. and Ramesh, A. 1989: Fundamentals of Cartography, Concept, New Delhi

## **SEMESTER-II**

### **Geography GE II: Geography of Odisha**

**(Credits: Theory-04, Practicals-02)**

**Full Marks: 75 (Midterm – 15+ End term – 60)**

**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Physiographic of Odisha, Drainage
- Unit II:** Climate, Soil, Natural Vegetation
- Unit III:** Agriculture: (a) Production and Distribution of Rice, Pulses, Oil seeds;  
(b) Agricultural Problems and Prospects
- Unit IV:** Minerals and power resources:  
(a) Distribution of Iron Ore, Bauxite, Coal  
(b) Iron and steel industry, Aluminum Industry, Cotton Textile
- Unit V:** (a) Population: Distribution and Growth  
(b) Transport : Roadways & Railways

#### **Project:**

**Credits – 2, Full Marks – 25,**

**Submission of project report on any topic from the course.**

#### **Reading List:**

1. Sinha, B. N. - Geography of Odisha
2. Roy, G. C.- Geography of Odisha

**Geography CC III: Human Geography**  
(Credits: Theory-04, Practicals-02)  
Full Marks: 75 (Midterm – 15+ End term – 60)  
(Unit Wise question pattern- Answer one question from each Unit)

- Unit I:** Introduction: Defining Human Geography; Major Themes; Contemporary Relevance
- Unit II:** Space: Cultural Regions;
- Unit III:** Society: Race, Religion & Language of World
- Unit IV:** Population: Population Growth and Distribution; Population Composition; Demographic Transition Theory
- Unit V:** Settlements: Types of Rural Settlements; Classification of Urban Settlements; Trends and Patterns of World Urbanization

**Project: Interaction with a community and report on socio cultural status.**  
**Credits – 2, Full Marks – 25,**

**Reading List:**

1. Chandna, R.C. (2010) Population Geography, Kalyani Publishers.
2. Hassan, M. I. (2005) Population Geography, Rawat Publications, Jaipur
3. Daniel, P.A. and Hopkinson, M. F. (1989) The Geography of Settlement, Oliver & Boyd, London

**Geography CC IV: Thematic Cartography**  
(Credits: Theory-04, Practicals-02)  
Full Marks: 75 (Midterm – 15+ End term – 60)  
(Unit Wise question pattern- Answer one question from each Unit)

- Unit I:** Maps – Classification and Types; Principles of Map Design.
- Unit II:** Diagrammatic Data Presentation – Line, Bar and Circle.
- Unit III:** Thematic Mapping Techniques – Properties, Uses and Limitations; Areal Data Choropleth, Dot, Proportional Circles; Point Data – Isopleths.
- Unit IV:** Cartographic Overlays – Point, Line and Areal Data.
- Unit V:** Thematic Maps – Preparation and Interpretation.

**Practical Record:**  
**Credits – 2, Full Marks – 25,**

A Thematic Atlas with ink should be prepared on a specific theme with five plates of any state in India. Using Line, Bar, Circle, Isopleths, Choropleth and Dot methods.

Record & viva-voce carries 10% of marks

**Reading List:**

1. Cuff J.D. and Mattson M. T., 1982: Thematic Maps: Their Design and Production, Methuen Young Books.
2. Dent B. D., Torguson J. S., and Holder T.W., 2008 Cartography: Thematic Map Design (6th Edition), Mcgraw-Hill Higher Education.
3. Gupta K. K. and Tyagi V. C., 1992: Working with Maps, Survey of india, DST, New Delhi.
4. Kraak M. J. and Ormeling F., 2003: Cartography, Visualization of Geo-Spatial Data, Prentice Hall.
5. Mishra R. P. and Ramesh A., 1989: Fundamentals of Cartography, Concept, New Delhi.



**SEMESTER - III**  
**Geography SEC I: Research Methods**  
**Credits – 2, Full marks 50 (Mid Term 10 + End Term 40)**  
**(Unit wise question pattern, answer one question from each unit)**

**Unit I:** Geography Enquiry: Definition and Ethics; Framing Research Questions, Objectives and Hypothesis, Literature Review; Preparing Sample Questionnaire.

**Unit II:** Data Collection: Type and Sources of Data; Methods of Collection; Input and Editing.

**Unit III:** Data Analysis: Qualitative Data Analysis: Quantitative Data Analysis: Data Representation Techniques.

**Unit IV:** Structure of a Research Report: Preliminaries; text; References and Citations.

**Reading List:**

1. Creswell J. 1994: Research Design: Qualitative and Quantitative Approaches sage Publications.
2. Dikshit, R.D. 2003. The Art and Science of Geography: Integrated Reading. Prentice Hall of India, New Delhi.
3. Evans M., 1988: "Participants Observation: The Researchers as Researcher as Research Tool" in Qualitative Method in Human Geography, eds. J. Eyles and D. Smith, Polity.
4. Misra, R. P. (2002) Research Methodology, Concept Publications, New Delhi

**Geography GE III: Climatology**  
**(Credits: Theory-04, Practicals-02)**  
**Full Marks: 75 (Midterm – 15+ End term – 60)**  
**(Unit Wise question pattern- Answer one question from each Unit)**

**Unit I:** Atmospheric Composition and Structure – Variation with Altitude, Latitude and Season.

**Unit II:** Insolation and Temperature – Factors and Distribution, Heat Budget, Temperature Inversion.

**Unit III:** Atmospheric Pressure and Winds – Planetary Winds, Forces affecting Winds, General Circulation, Jet Streams.

**Unit IV:** Atmospheric Moisture – Evaporation, Humidity, Condensation, Fog and Clouds, Precipitation Types, Stability and Instability.

**Unit V:** Cyclones – Tropical Cyclones, Extra Tropical Cyclones, Monsoon - Origin and Mechanism.

**Project : Submission of project report on any topic from the course.**

**Credits – 2, Full Marks – 25,**

**Reading List -**

1. Barry R.G. and Carleton A. M., 2001: Synoptic and Dynamic Climatology, Routledge, UK.
2. Barry R. G. and Corley R.J., 1998: Atmosphere, Weather and Climate, Routledge, New Work.
3. Critchfield H. J., 1987: General Climatology, Prentice Hall of India, New Delh

**Geography CC V: Climatology**  
**(Credits: Theory-04, Practicals-02)**  
**Full Marks: 75 (Midterm – 15+ End term – 60)**  
**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Atmospheric Composition and Structure – Variation with Altitude, Latitude and Season.
- Unit II:** Insolation and Temperature – Factors and Distribution, Heat Budget, Temperature Inversion.
- Unit III:** Atmospheric Pressure and Winds – Planetary Winds, Forces affecting Winds, General Circulation, Jet Streams.
- Unit IV:** Atmospheric Moisture – Evaporation, Humidity, Condensation, Fog and Clouds, Precipitation Types, Stability and Instability, Climatic Regions (Koppen)
- Unit V:** Cyclones – Tropical Cyclones, Extra Tropical Cyclones, Monsoon - Origin and Mechanism.

**Practical**  
**Credits – 2, Full Marks – 25,**

1. Drawing & Use of weather instruments- Six maximum & Minimum Thermometer, Aneroid Barometer, Rain Gauge.
2. Interpretation of Weather Map.
3. Record & Viva-Voce carries 10% of marks

**Reading List -**

1. Barry R.G. and Carleton A. M., 2001: Synoptic and Dynamic Climatology, Routledge, UK.
2. Barry R. G. and Corley R.J., 1998: Atmosphere, Weather and Climate, Routledge, New York.
3. Critchfield H. J., 1987: General Climatology, Prentice Hall of India, New Delhi

## **Geography CC VI: Statistical Methods in Geography**

**(Credits: Theory-04, Practicals-02)**

**Full Marks: 75 (Midterm – 15+ End term – 60)**

**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Use of Data in Geography: Geographical Data Matrix, Sources of Data, Scales of Measurement (Nominal, Ordinal, Interval, Ratio).
- Unit II:** Tabulation and Descriptive Statistics: Frequencies (Deciles, Quartiles), Cross Tabulation, Central Tendency (Mean, Median and Mode)
- Unit III:** Dispersion (Standard Deviation, Variance and Coefficient of Variation).
- Unit IV:** Sampling: Purposive, Random, Systematic and Stratified.
- Unit V:** Association and Correlation: Rank Correlation, Product Moment Correlation, and Simple Regression,

### **Practical**

**Credits – 2, Full Marks – 25,**

**Class Record:** Each student will submit a record containing five exercises:

1. Based on the above table, a frequency table, measures of central tendency and dispersion would be computed and interpreted for any two attributes.
2. Histograms and frequency curve would be prepared **on the entire data set** and attempt to fit a normal curve and interpreted for one or two variables.
3. Drawing of scatter diagram
4. Record & Viva-voce carries 10% of marks

## **Geography CC VII: Field Work and Research Methodology**

**(Credits: Theory-04, Practicals-02)**

**Full Marks: 75 (Midterm – 15+ End term – 60)**

**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Field Work in Geographical Studies – Role, Value and Ethics of Field-Work
- Unit II:** Defining the Field and Identifying the Case Study – Rural / Urban / Physical / Human / Environmental.
- Unit III:** Field Techniques – Merits, Demerits and Selection of the Appropriate Technique; Observation (Participant / Non Participant), Questionnaires (Open/ Closed / Structured / Non-Structured); Interview with Special Focus on Focused Group Discussions; Space Survey (Transects and Quadrants, Constructing a Sketch).
- Unit IV:** Use of Field Tools – Collection of Material for Physical and Socio-Economic Surveys.
- Unit V:** Designing the Field Report – Aims and Objectives, Methodology, Analysis, Interpretation and Writing the Report.

**Project Work - 25 Marks**

**Credits -02**

### **Reading List:**

1. Creswell J., 1994: Research Design: Qualitative & Quantitative Approaches, Sage Publications.
2. Dikshit R.D., 2003: The Art and Science of Geography: Integrated Reading. Prentice Hall of India, New Delhi.
3. Evans M., 1988: "Participants Observation: The Researcher as Research Tool" in Qualitative Methods in Human Geography, eds. J. Eyles and D. Smith, Polity

**SEMESTER-IV**  
**English SEC II: Communicative English & English writing skill**  
**50 (10+40) marks, 02 credits**

**Unit I: Introduction to the essentials of Business Communication: Theory and practice**

Communication: Definition, Process, Purpose, Communication Network, Types of Communication, Barriers to communication

**Unit II: Mechanics of Writing**

Stages of writing, Preparing Notes, Style and Tone, linguistic unity, coherence and cohesion, How to Compose Business Messages, Citing references, and using bibliographical

**Unit III: Writing a project report**

Report planning, Types of Reports, Developing an Outline, Sections of the Report

**Unit IV: Writing minutes of meetings, Circular, Notices, Memos, Agenda**

**Unit V: E-correspondence:**

E-mails, Business Letter Format, Styles, Types of Letter

**Suggested Readings:**

1. Scot, O.; Contemporary *Business Communication*. Biztantra, New Delhi.
2. Lesikar, R.V. & Flatley, M.E.; *Basic Business Communication Skills for Empowering the Internet Generation*, Tata McGraw Hill Publishing Company Ltd. New Delhi.
3. Ludlow, R. & Panton, F.; *The Essence of Effective Communications*, Prentice Hall of India Pvt. Ltd., New Delhi.
4. R. C. Bhatia, *Business Communication*, Ane Books Pvt Ltd, New Delhi

**Geography GE IV: Human Geography**  
(Credits: Theory-04, Practicals-02)  
Full Marks: 75 (Midterm – 15+ End term – 60)  
(Unit Wise question pattern- Answer one question from each Unit)

- Unit I:** Introduction: Defining Human Geography; Major Themes; Contemporary Relevance
- Unit II:** Space: Cultural Regions;
- Unit III:** Society: Race, Religion and Language of World
- Unit IV:** Population: Population Growth and Distribution; Population Composition; Demographic Transition Theory
- Unit V:** Settlements: Types of Rural Settlements; Types of Urban Settlements; Trends and Patterns of World Urbanization

**Project:**  
Credits – 2, Full Marks – 25,  
Interaction with a community and report on socio cultural status

**Reading List:**

1. Chandna, R.C. (2010) Population Geography, Kalyani Publishers.
2. Hassan, M. I. (2005) Population Geography, Rawat Publications, Jaipur
3. Daniel, P.A. and Hopkinson, M. F. (1989) The Geography of Settlement, Oliver & Boyd, London

## **Geography CC VIII: Evolution of Geographical Thought**

**(Credits: Theory-04, Practicals-02)**

**Full Marks: 75 (Midterm – 15+ End term – 60)**

**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Paradigms in Geography, Fundamentals concepts for understanding philosophy of Geography: Meaning and scope of Geography
- Unit II:** Pre-Modern – Early Origins of Geographical Thinking with reference to the Classical and Medieval Philosophies. Greek Geography, Roman Geography, Arab Geography
- Unit III:** Modern – Evolution of Geographical Thinking and Disciplinary Trends in Germany, France, Britain, United States of America.
- Unit IV:** Debates – Environmental Determinism and Possibilism, Systematic and Regional, Ideographic and Nomeothetic.
- Unit V:** Trends – Quantitative Revolution and its Impact, Behaviouralism, Systems Approach, Radicalism.

**Project - 25 Marks, Credits 02**

**Project form course content**

### **Reading List:**

1. Arentsen M., Stam R. and Thuijjs R., 2000: *Post-Modern Approaches to Space*, e-book.
2. Bhat, L.S. (2009) *Geography in India* (selected Themes). Pearson
3. Bonnett A., 2008 *What is Geography?* Sage
4. Dikshit R. D., 1997: *Geographical Thought: A Contextual History of Ideas*, Prentice- Hall India.

## **Geography CC IX: Economic Geography**

**(Credits: Theory-04, Practicals-02)**

**Full Marks: 75 (Midterm – 15+ End term – 60)**

**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Introduction: Concept and classification of economic activity
- Unit II:** Factors Affecting location of Economic Activity with special reference to Agriculture, ( Von Thunen Theory) Industry (Weber's theory)
- Unit III:** Primary Activities: Subsistence and Commercial agriculture, forestry, fishing and mining.
- Unit IV:** Secondary Activities: Manufacturing (Cotton Textile, Iron and Steel), Concept of Manufacturing Regions, Special Economic Zones and Technology Parks.
- Unit V:** Tertiary Activities: Transport, Trade and Services.

**Project - 25 Marks, Credits -02**

**Submission of project report on any topic from the course**

1. Alexander J. W., 1963: *Economic Geography*, Prentice - Hall Inc., Englewood Cliffs, New Jersey
2. Coe N. M., Kelly P.F. and Yeung H. W., 2007: *Economic Geography, A Contemporary Introduction*, Wiley Clackwell
3. Hodder B. W. and Lee Roger, 1974: *Economic Geography*, Taylor and Francis.

**Geography CC X: Environmental Geography**  
(Credits: Theory-04, Practicals-02)  
Full Marks: 75 (Midterm – 15+ End term – 60)  
(Unit Wise question pattern- Answer one question from each Unit)

- Unit I:** Environmental Geography – Concept and Scope
- Unit II:** Human-Environment Relationships – Historical Progression, Adaptation; difficult Biomes
- Unit III:** Ecosystem – Concept, Structure and Functions
- Unit IV:** Environmental Problems in Tropical, Temperate and Polar Ecosystems
- Unit V:** Environmental Programmes and Policies – Global, National and Local levels

**Project - 25 Marks, Credits -02**  
**Submission of Project report on any topic from the course**

**Reading List:**

1. Chandana R. C., 2002 Environmental Geography, Kalyani, Ludhiana.
2. Cunningham W.P., and Cunningham M.A., 2004: Principals of Environmental Science: Inquiry and Applications, Tata Macgraw Hill, New Delhi.
3. Goudie A., 2001: The Nature of the Environment, Blackwell, Oxford.

**SEMESTER - V**  
**Geography DSE I: Population Geography**  
(Credits: Theory-04, Practicals-02)  
Full Marks: 75 (Midterm – 15+ End term – 60)  
(Unit Wise question pattern- Answer one question from each Unit)

- Unit I:** Defining the Field – Nature and Scope; Sources of Data with special reference to India (Census, Vital Statistics and NSS).
- Unit II:** Population Size, Distribution and Growth – Determinants and Patterns; Theories of Growth – Malthusian Theory and Demographic Transition Theory.
- Unit III:** Population Dynamics: Fertility, Mortality and Migration – Measures, Determinants and Implications.
- Unit IV:** Population Composition and Characteristics – Age-Sex Composition; Rural and Urban Composition; Literacy.
- Unit V:** Contemporary Issues – Ageing of Population; Declining Sex Ratio; HIV/AIDS.

**Project - 25 marks, Credits - 02**  
**Submission of Project report on any topic from the course**

**Reading List:**

1. Barret H. R., 1995: Population Geography, Oliver and Body
2. Bhende A. and Kanitkar T. 2000:Principal of Population studies, Himalaya Publishing House.
3. Chandana R. C. and Sindhu M. S., 1980: An Introduction to Population Geography, Kalyani Publishres.
4. Clarke J. I., 1965: Population Geography, Pergamon Press Oxford.



## **Geography DSE II: Resource Geography**

**(Credits: Theory-04, Practicals-02)**

**Full Marks: 75 (Midterm – 15+ End term – 60)**

**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Natural Resource: Concept, Classification and Techniques
- Unit II:** Distribution, Utilization of Land Resource and Water Resources
- Unit III:** Distribution, Utilisation, of Forest and Energy Resources
- Unit IV:** Problem and management of Land Resources, Water Resources, Forest Resources, Energy Resources
- Unit V:** Appraisal and Conservation and Natural Resources

**Project - Marks - 25, Credits- 02**

**Submission of project report on any topic from the course**

### **Reading List:**

1. Cutter S. N., Renwick H. L. and Renwick W., 1991: Exploitation, Conservation, Preservation: A Geographical Perspective on Natural Resources Use, John Wiley and Sons, New York.
2. Gadgil M. and Guha R., 2005: The use and Abuse of Nature: Incorporating This Fissured Land: An Ecological History of India and Ecology and Equity, Oxford University Press, USA
3. Holechek J.L.C., Richard A., Fisher J. T. and Valdez R., 2003: Natural Resources : Ecological, Economics and Policy, Prentice Hall, New Jersey.
4. Jones G. and Hollier G., Resources, Society and Environmental Management, Paul Chapman, London

## **Geography CC XI: Regional Planning and Development**

**(Credits: Theory-04, Practicals-02)**

**Full Marks: 75 (Midterm – 15+ End term – 60)**

**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Definition of Region, Evolution and Types of Regional planning: Formal, Functional, and Planning Regions and Regional Planning; Need for Regional Planning;
- Unit II:** Choice of a Region for Planning: Characteristics of an Ideal Planning Region; Delineation of Planning Region; Regionalization of India for Planning (Agro Ecological Zones)
- Unit III:** Theories and Models for Regional Planning: Growth Pole Model of Perroux; Myrdal, Hirschman, Rostow and Friedmann;
- Unit IV:** Changing Concept of Development, Concept of underdevelopment; Efficiency-Equity Debate
- Unit V:** Measuring development: Indicators (Economic, Social and Environmental): Human development

**Project - Marks- 25, Credits-02**

**Submission of project report on any topic from the course**

### **Reading List:**

1. Blij H. J. De, 1971: Geography: Regions and Concepts John Wiley and Sons.
2. Claval P. L., 1998 An Introduction to Regional Geography, Blackwell Publishers, Oxford and Massachusetts.
3. Friedmann J. and Alonson W. 1975: Regional Policy- Reading in Theory and Applications, MIT Press, Massachusetts.

**Geography CC X II: Remote Sensing and GIS**  
**(Credits: Theory-04, Practicals-02)**  
**Full Marks: 75 (Midterm – 15+ End term – 60)**  
**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Remote Sensing and GIS: Definition and Components, Development, Platforms and Types,
- Unit II:** Aerial Photography and Satellite Remote Sensing: Principles, Types and Geometry of Aerial Photograph; Principles of Remote Sensing, EMR Interaction with Atmosphere and Earth Surface; Satellites (Landsat and IRS) and Sensors.
- Unit III:** GIS Data Structures: Types (spatial and Non-spatial), Raster and Vector Data Structure
- Unit IV:** Image Processing (Digital and Manual) and Data Analysis: Pre-processing (Radiometric and Geometric Correction), Enhancement (Filtering); Classification (Supervised and Un-supervised), Geo-Referencing; Editing and Output; Overlays
- Unit V:** Interpretation and Application of Remote Sensing and GIS: Land use/ Land Cover, Urban Sprawl Analysis; Forests Monitoring

**Project - Mark- 25, Credits- 02**

A project file consisting of two exercises will be done from aerial photos and satellite images (scale, orientation and interpretation) or 3 exercises on using any GIS Software on above mentioned themes

or

Submission of project report on any topic from the course

Record & Viva-voce carries 10% of marks

**Reading List:**

1. Campbell J. B., 2007: Introduction to Remote Sensing, Guildford Press.
2. Jensen J. R., 2004: Introductory Digital Image Processing: A Remote Sensing Perspective, Prentice Hall .
3. Joseph G., 2005: Fundamentals of Remote Sensing, United Press India.

**SEMESTER - VI**  
**Geography DSE III: Urban Geography**  
(Credits: Theory-04, Practicals-02)  
Full Marks: 75 (Midterm – 15+ End term – 60)  
(Unit Wise question pattern- Answer one question from each Unit)

- Unit I:** Urban geography: Introduction, nature and scope; history of urbanization.
- Unit II:** Patterns of Urbanisation in developed and developing countries
- Unit III:** Functional classification of cities: Quantitative and Qualitative Methods
- Unit IV:** Urban Issues: problems of housing, slums, civic amenities (water and transport)
- Unit V:** Case studies of Delhi, Mumbai, Kolkata, Chennai and Chandigarh with reference to land use & Urban Issues.

**Project- 25 Marks, Credits- 02**  
**Submission of project report on any topic from the course**

**Reading List:**

1. Fyfe N. R. and Kenny J. T., 2005: The Urban Geography Reader, Routledge.
2. Graham S. and marvin S., 2001: Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition, Routledges.
3. Hall T., 2006, Urban Geography, Taylor and Francis.
4. Kaplan D. H., Wheeler J. O., and Holloway S.R., 2008: Urban Geography, John Wiley.

**Geography DSE IV:**  
**DISSERTATION/ PROJECT WORK**  
Credits - 06  
FULL MARKS-100  
(to be evaluated internally)

A project report may be given in view of discipline specific papers. It is considered as a special course involving application of knowledge solving exploring a real life situation and difficult problem.

## **Geography CC X III: Geography of India**

**(Credits: Theory-04, Practicals-02)**

**Full Marks: 75 (Midterm – 15+ End term – 60)**

**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Physical: Physiographic Divisions, soil and vegetation, climate (characteristics and classification)
- Unit II:** Population: Distribution, growth and structure
- Unit III:** Economic (A): Mineral and power resources distribution and utilisation of iron ore, coal, petroleum, gas;
- Unit IV:** Economic (B): Agricultural production and distribution of rice and wheat, industrial development : automobile, Information technology, Iron & Steel, Cotton Industry
- Unit V:** Socials Regionalization of India: Distribution of population by race, caste, religion, language, tribes. Physiographic (R. L. Singh),

**Project - 25 Marks, Credits-02**

**Submission of project report on any topic from the course**

### **Reading:**

1. Deshpande C. D., 1992: India: A Regional Interpretation, ICSSR, New Delhi.
2. Johnson, B. L. C., ed. 2001. Geographical Dictionary of India, Vision Books, New Delhi.
3. Mandal R. B., (ed), 1990: Patterns of Regional Geography- An International Perspective. Vol. 3 - Indian Perspective

## **Geography CC X IV: Oceanography**

**(Credits: Theory-04, Practicals-02)**

**Full Marks: 75 (Midterm – 15+ End term – 60)**

**(Unit Wise question pattern- Answer one question from each Unit)**

- Unit I:** Bottom Relief of Ocean, Atlantic & Indian Ocean
- Unit II:** Temperature and salinity of ocean - determinants and distribution.
- Unit III:** Movement of Ocean water- Waves, Currents (Atlantic and Indian) Tides.
- Unit IV:** Coral Reefs : Types, Theory of Origin (Darwin and Daly)
- Unit V:** Man and Marine Resources: Types of Marine resources, (biotic and minerals), Marine Pollution.

**Project - 25 marks, Credits-02**

**Submission of project on any topic from the course**

### **Reading List:**

1. Sharma and Vatal, Oceanography
2. Lal, D. S. - Oceanography

