

**GOVERNMENT COLLEGE (AUTONOMOUS),
BHAWANIPATNA**

(College with potential for excellence)



COURSES OF STUDIES

**FOR THREE YEAR DEGREE COURSE
IN
A R T S
(UNDER CBCS)**

SUB: GEOGRAPHY

Semester-I	2017	Semester-II	2018
Semester-III	2018	Semester-IV	2019
Semester-V	2019	Semester-VI	2020

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COURSE STRUCTURE

		Paper Code	Credit Points
Semester-I	1	AECC-1	02
	2	GE-1	06
	3	CORE-1	06
	4	CORE-2	06
		TOTAL	20
Semester-II	1	AECC-2	02
	2	GE-2	06
	3	CORE-3	06
	4	CORE-4	06
		TOTAL	20
Semester-III	1	SEC-1	02
	2	GE-3	06
	3	CORE-5	06
	4	CORE-6	06
	4	CORE-7	06
		TOTAL	26
Semester-IV	1	SEC-2	02
	2	GE-4	06
	3	CORE-8	06
	4	CORE-9	06
	4	CORE-10	06
		TOTAL	26
Semester-V	1	CORE-11	06
	2	CORE-12	06
	3	DSE-1	06
	4	DSE-2	06
		TOTAL	24
Semester-VI	1	CORE-13	06
	2	CORE-14	06
	3	DSE-3	06
	4	DSE-4	06
		TOTAL	24
		GRAND TOTAL	140

C O N T E N T

	Paper Code	Page No.
1	AECC	03
2	SEC	07
3	GE	09
4	CORE	21
5	DSE	33

ABILITY ENHANCEMENT COMPULSORY COURSE (AECC)

SEMESTER-I

AECC-1: ENGLISH COMMUNICATION

CREDITS: 2, (Theory=2)

(Total Marks: 50, Mid Sem=10, Term End=40, Duration: 2 hrs)

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.

MODULE-1: Reading Comprehension [15]

- 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

MODULE-2: Writing [15]

Expanding an Idea	Writing a Memo	Report Writing
Creative Writing	News Story	Setting in Creative Writing
Writing a Business Letter	Letters to the Editor	Précis Writing
CV & Resume Writing	Dialog writing	Covering Letter
Writing Formal Email	Elements of Story Writing	Note Making
Information Transfer	Interviewing for news papers	

MODULE-3: Language functions in listening and conversation [06]

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 [14]

Simple and Compound Sentences; Complex Sentences; Noun Clause; Adjective Clause; Adverb Clause; The Conditionals in English; The Second Conditional; The Third Conditional; Words and their features; Phrasal Verbs; Collocation; Using Modals; Use of Passives; Use of Prepositions; Subject-verb Agreement; Sentence as a system; 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:	Writing : 1 question	04 x 01qn = 04 marks	
	Speaking: 2 questions	03x02 qns = 06 marks	
	Total	10 marks	
Term End :	MODULE-1	Reading: 05 questions	03x 05 qns= 15 marks
		(3 prose and two poetry questions)	
	MODULE-2	Writing: 03 questions	05 x 03 qns= 15 marks
	MODULE-3	Grammar & usage: 10 qns	01x 10 qns = 10 marks
	Total		40 marks

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

Book Prescribed

Vistas and Visions: An Anthology of Prose and Poetry. (Ed.)Kalyani Samantray, Himansu S. Mohapatra, Jatindra K. Nayak, Gopa Ranjan Mishra, Arun Kumar Mohanty, OBS

Texts to be studied : Prose (Decoding Newspapers, The Gold Frame, Of Truth, Lifestyle English)

Poetry (Lines Composed a few miles above Tintern Abbey, Sonnet 46 (Shakespeare), Pigeons)

All grammar and writing activities in the textbook



AECC-1: ODIA

SEMESTER-I

ଆସ୍ଥାନ୍ୟାୟକ-୨, ମୋଟ୍‌ଗ୍ରେଣୀପାଠଦାନ-୨୦ ଘଣ୍ଟା, ଛୁଟିଫୁଲ-୫୦, ପରୀକ୍ଷା ସମୟ-୨ ଘଣ୍ଟା
ପାଠ୍ୟପୁସ୍ତକାଳୟ ଗୋଟିଏ ପାଠ୍ୟକୁ ବାଛିବାକୁ ହେବ ।

ପାଠ୍ୟ-୧

ଉପାଂଶ-୧: (ଗଳ୍ପବିଭାଗ) ଗଳ୍ପ ତରଂଗ-ପ୍ରକାଶକ ସମ୍ବଲପୁର ସାହିତ୍ୟ ସଂସଦ
ଭଗବାନ ମଲାପରେ-ମହାପାତ୍ର ନୀଳମଣି ସାହୁ
ବିଷକନ୍ୟା କାହାଣୀ-ମନୋଜ ଦାସ
ଦ୍ୱିତୀୟ ଶ୍ରେଣୀମାନଙ୍କୁ ବେହେରା
ଝୁଟି ପ୍ରଶ୍ନୋତ୍ତର ପ୍ରଶ୍ନର ଉତ୍ତର ପାଞ୍ଚଗହ ଶବ୍ଦରେ ଲେଖିବାକୁ ହେବ । (୧୦)

ଉପାଂଶ-୨: (କବିତାଶ୍ରୀ) ଅଭିଭାବ-ଫୁଲସାସ ମହାନ୍ତି
ଲକ୍ଷ୍ମୀ-ରମାକାନ୍ତ ରଥ
କୁଞ୍ଜପଦ୍ମଲୋକ-ପ୍ରତିଭା ଶତପଥୀ
ଝୁଟି ପ୍ରଶ୍ନୋତ୍ତର ପ୍ରଶ୍ନର ଉତ୍ତର ପାଞ୍ଚଗହ ଶବ୍ଦରେ ଲେଖିବାକୁ ହେବ । (୧୦)

ଉପାଂଶ-୩: (ଅବବୋଧ) ଧକଶହପଗାଶ ଶବ୍ଦର ଧକ ଅନୁକ୍ରମ ପ୍ରଦାନ କରାଯିବ ।
୫ଟି ପ୍ରଶ୍ନ ପଢ଼ିବ ଧର୍ମ ପ୍ରତ୍ୟେକ ପ୍ରଶ୍ନକୁ ୫୨ । (୫x୨=୧୦)

ଉପାଂଶ-୪: (ଭାବ ସଂପ୍ରସାରଣ) କୌଣସି ଧକ ଛୁଟି ପ୍ରଶ୍ନଭାବରେ ପ୍ରଦାନ କରାଯିବ । (୧୦)

ଉପାଂଶ-୫: (ବିଭକ୍ତି) ବ୍ୟାକରଣ
ଆଠଟିରୁପାଞ୍ଚଟି ପ୍ରଶ୍ନର ଉତ୍ତର ଦେବାକୁ ହେବ । ପ୍ରତ୍ୟେକ ପ୍ରଶ୍ନର ମୂଲ୍ୟ ୨ ନମ୍ବର । (୫x୨=୧୦)

ପାଠ୍ୟ-୨ / Course-୨ : ସଂପର୍କ ଅନୁସିଧି

- ଉପାଂଶ-୧: ସଂପର୍କର ଭିତ୍ତି, ପରିଭାଷା, ଶୁଦ୍ଧି ଓ ପରିସର
- ଉପାଂଶ-୨: ସଂପର୍କର ପ୍ରକାରଭେଦ: କଥିତଲିଖିତ, ବ୍ୟକ୍ତିଗତପାଠ୍ୟାଳୟସ୍ଥ ଚିତ୍ରବ୍ୟାବସାୟିକ-ସାହିତ୍ୟିକ
- ଉପାଂଶ-୩: ସଂପର୍କର ବାଧକ ଓ ସଫଳସାଧନର ଦିଗ
- ଉପାଂଶ-୪: ସଂପର୍କରେ ସାହିତ୍ୟର ଶୃଙ୍ଖଳା
- ଉପାଂଶ-୫: ସଫଳ ସଂପର୍କର ଭାଷା

ପାଠ୍ୟ-୩ / Course-୩ : ସଂପର୍କର ରୀତି / ଭଙ୍ଗୀ ଓ ମାଧ୍ୟମ

- ଉପାଂଶ-୧: ସୁଗତକଥନ ଓ ସଂଳାପିକ ଭଙ୍ଗୀ / ସାହିତ୍ୟମାଧ୍ୟମ ଓ ଯୋଗାଯୋଗ
- ଉପାଂଶ-୨: ଦଳଗତ ଆଲୋଚନା ଓ ବିତର୍କ
- ଉପାଂଶ-୩: ସାକ୍ଷାତ୍‌କାର
- ଉପାଂଶ-୪: ପତ୍ରଲିଖନ ପଦ୍ଧତି / ବିକ୍ଷିପ୍ତଲିଖନ
- ଉପାଂଶ-୫: ବୈଷ୍ଟିକ ପଦ୍ଧତି ଓ ସଂପର୍କର ଭାଷା ରୁଚା, ସଂକ୍ଷିପ୍ତ ଛୁଟି ପ୍ରେରଣ, ଦୃଶ୍ୟଶ୍ରବ୍ୟ ସଂଚାର ବିଧାନ, ଡେବ୍‌ସାଇଟ୍, ଆନ୍ତର୍ଜାତିକ ପଦ୍ଧତି / ଇଣ୍ଟରନେଟ୍

ଗରୁ ତାଲିକା

- ୧- ଗଳ୍ପତରଂଗ- ପ୍ରକାଶକ ସମ୍ବଲପୁର ସାହିତ୍ୟ ସଂସଦ ।
- ୨- ସଂଯୋଗ ଅନୁସିଧି/ବ୍ୟାବହାରିକ ଓଡ଼ିଆ ଭାଷା ଓଡ଼ିଆଗାମକ ବ୍ୟାକରଣ, ସନ୍ତୋଷ ତ୍ରିପାଠୀ, ନୀଳଦା, କଟକ ।
- ୩- ପ୍ରାୟୋଗିକ ଓଡ଼ିଆ ଭାଷା ଓଡ଼ିଆ ରାଜ୍ୟ ପାଠ୍ୟପୁସ୍ତକ ପ୍ରଣୟନ ଓ ପ୍ରକାଶନ ସଂସ୍ଥା ।
- ୪- ସମ୍ବନ୍ଧ ଓ ସାମ୍ବାଦିକତାତତ୍ତ୍ୱଗଣେଷ ମହାପାତ୍ର, ଓଡ଼ିଆ ରାଜ୍ୟ ପାଠ୍ୟପୁସ୍ତକ ପ୍ରଣୟନ ଓ ପ୍ରକାଶନ ସଂସ୍ଥା ।
- ୫- କବିତାଶ୍ରୀ ।
- ୬- ଆଧୁନିକ ଓଡ଼ିଆବ୍ୟାକରଣ - ଧନେଶ୍ୱର ମହାପାତ୍ର ।



MODULE-1: कविता

- (i) कबीर - साखी : १ से १०
- (ii) तुलसी - विनयपत्रिका - पद १ और २
- (iii) प्रसाद - मधुमय देश
- (iv) निराला - भिक्षुक
- (v) अज्ञेय - हिरोशिमा

MODULE-2: गद्य

- (i) रामचन्द्र शुक्ल - उत्साह
- (ii) हजारी प्रसाद द्विवेदी - कुटज
- (iii) हरिशंकर परसाई - सदाचार का तावीज

MODULE-3: शब्द ज्ञान

- (i) शब्द सुद्धि
- (ii) बाक्य सुद्धि
- (iii) पययिवाची शब्द
- (iv) विलोम शब्द

MODULE-4: सामान्य ज्ञान

- (i) निबंध लेखन

अंक विभाजन:

विभाग - (क)	अपर्युक्त इकाइयों I, II और IV से 03 प्रश्न पूछे जाएँगे। उनमें से 02 के उत्तर लिखने होंगे। (प्रत्येक उत्तर 700- 1000 शब्दों के बिच)	10X2=20
विभाग - (ख)	अपर्युक्त इकाइयों I और II से 04 पद्यांश / गद्यांश पूछे जाएँगे। जिनमें से 02 के उत्तर लिखने होंगे। (प्रत्येक उत्तर 400-500 शब्दों के बिच)	05X2=10
विभाग - (ग)	युनिट III से अति संक्षीप्त प्रश्न पूछे जाएँगे।	02X5=10
	End Semester	40
	Internal	10
	Total	50

पाठ्य पुस्तक:

हिन्दी प्रसून - सं डॉ अंजुमन आरा, प्लानेट भी, कटक

SEMESTER-II

ABILITY ENHANCEMENT COMPULSORY COURSE (AECC)

AECC-II: ENVIRONMENT STUDIES (ENVS)

(CREDITS: 2, Theory=2)

(Total Marks: 50, Mid Sem=10, Term End=40, Duration: 2 hrs)

MODULE-1: Introduction to environmental studies and Ecosystem [BOTANY Dept]

Multidisciplinary nature of environmental studies;

Scope and importance; Concept of sustainability and sustainable development.

Ecosystems : [ZOOLOGY Dept]

What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: Food chains, food webs and ecological succession. Case studies of the aquatic ecosystems (ponds) (8 lectures)

MODULE-2:

Natural Resources: Renewable and Non-renewable Resources [ZOOLOGY Dept]

- Land resources and land use change; Land degradation, soil erosion and desertification.
- Deforestation: Causes and impacts due to mining, dam building on environment, forests, Biodiversity and tribal populations.
- Water : Use and over-exploitation of surface and ground water, floods, droughts, conflicts Over water (international & inter-state).
- Energy resources : Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs, case studies. (8 lectures)

MODULE-3: Biodiversity and Conservation [BOTANY Dept]

- Levels of biological diversity : genetic, species and ecosystem diversity; Biogeographic zones Of India; Biodiversity patterns and global biodiversity hot spots
- India as a mega---biodiversity nation; Endangered and endemic species of India
- Threats to biodiversity : Habitat loss, poaching of wildlife, man---wildlife conflicts, biological invasions;
- Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.
- Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value. (8 lectures) [BOTANY Dept]

MODULE-4: Environmental Pollution [CHEMISTRY Dept]

- Environmental pollution : types, causes, effects and controls; Air, water, soil and noise pollution
- Nuclear hazards and human health risks
- Solid waste management: Control measures of urban and industrial waste.
- global warming, ozone layer depletion. (8 lectures)

References:

1. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. *Ecology, Environmental Science and Conservation*. S.Chand Publishing, New Delhi.
2. Das and Mishra . Man and Environment.
3. S. Swain. Environmental Studies.
4. M C Dash. Fundamental of Ecology.
5. Shukla and Chandel. A Text Book of Plant Ecology.

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SKILL ENHANCEMENT COURSE (SEC)

SEMESTER-III

SEC-1: COMMUNICATIVE ENGLISH AND WRITING SKILL

(CREDITS: 2, Theory=2)

(Total Marks: 50, Mid Sem=10, Term End=40, Duration: 2 hrs)

MODULE-1: Communication Process: 10 Marks (1 long question / 2 short questions)

- Process of Communication, Characteristics of Business Communication, Inter-personal, Intra-personal and Group communication
- Definition, Objectives, Process, Channels and importance of Communication
- Principles of effective communication and Barriers to effective Communication.
- Types of Communication – Written, Verbal, Non-verbal, informal and Formal and Grape-vine
- Written Communication – Writing letters for inquiries, orders, complaints and claims, Condolence, Complement letters.

MODULE-2: Analytical Grammar: 10 Marks (1 x 10 = 10)

- **Vocabulary** : Phrasal Verbs, Synonyms, Antonyms, Idioms, Commercial Terms, Countable and uncountable Nouns, Tense Patterns, Modal Verbs, Prepositions and Phrasal Verbs, The Imperatives, Interrogative, The Passive, Direct and Reported Speech.

MODULE-3: WRITING SKILL: 10 Marks (1 long question/ 2 short questions)

- Writing paragraph, developing ideas into paragraphs, writing personal letters and notes, writing applications, official letters and business letters, writing curriculum vitae/resume, writing e-mails, sms, advertisement and short notes.

MODULE-4: Creative Skills 10 Marks (1 long question)

- Reporting (on issues, events and business matters), Note making and summarising, Description of objects/events/process, Writing and designing pamphlet/brochure, Writing Review/ comment.

Recommended reading:

1. Fluency in English – Part I & II, Oxford University Press.
2. A. J. Thomson & A. V. Martinet, Practice English Grammar.
3. L. Gartside (ELBS) Modern Business Letters.
4. Business English, Pearson, 2008
5. Pradhan, Bhende and Thakur – Business Communication, Himalaya Publishing House.
6. U. S. Rai & M. S. Rai, Business Communication, Himalaya Publishing House, Bombay.
7. Language, Literature and Creativity, Orient Blackswan 2013

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SEMESTER-IV

SEC-2: BASIC COMPUTER APPLICATION

(CREDITS: 2, Theory=2)

(Total Marks: 50, Mid Sem=10, Term End=40, Duration: 2 hrs)

Total Classes: 30 (Thirty)

MODULE-1: 4 classes

Introduction: Introduction to computer system: Computer, Hardware , Software, Types of software, Types of Computer, uses of computer.

MODULE-2: 6 Classes

Human Computer Interface: Operating system as user interface, utility programs, Input and output devices: Keyboard, Mouse, Joystick, Scanner (OCR, OBR, OMR, MICR), Digital Camera, Touch Screen. Monitor, Printer, Plotter,

Windows-Introduction, functions, properties and different versions, working with Start Menu, Control Panel, Explorer, Desktop and Icons, My computer, Recycle bin, My Document, Good practices to make the windows run efficiently.

MODULE-3: 6 classes

Memory: Primary, secondary, auxiliary memory, RAM, ROM, cache memory, hard disks, optical disks, USB storage, Memory Card, C.P.U., registers,ALU, Control Unit, system bus, processors(only basic idea about function and type).

MODULE-4: 5 classes

VIRUS –Meaning, function, characteristics and types, Uses of Firewall and Antivirus.

Electronic mail and its features- inbox, composing mails, sending mail, thrash, spam folder in email.

MODULE-5: 9 classes

Introduction to Ms.Office:

Ms.Word: Creating a file, Page formatting, editing, printing, saving a file, bullet and numbering, spell check, indenting, paragraph formatting, find and replace.

Ms. Excel: Spread sheet and its uses, Setting column and row, Inserting formula and uses of various functions(AND, IF, NOT, OR, SUM, MAX, COUNT, COUNTA, COUNTIF, AVERAGE), use of Auto sum, Formatting cell, printing, copying and saving.

Ms.Power Point: Features, Uses, Menus, Tool bar, template and wizard, creating animation and effects, saving, deleting and opening a presentations. characteristics of a good presentation.

Reference Book:

1. Computer Fundamental by PK Sinha – BPB publication.
2. Ms.Office 2007 by Rutkoshy, Seguin – BPB publication.
3. Goel, Computer Fundamentals, Pearson Education, 2010.

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GENERIC ELECTIVE (GE)

EDUCATION

SEMESTER-I

GE-1: VISION OF EDUCATION IN INDIA :ISSUES AND CONCERNS

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Normative vision of Indian Education

Normative orientation of Indian Education: A historical enquiry.

Constitutional provisions on education that reflect national ideas : Democracy, Equity, Liberty, Secularism and social justice

India as an evolving nation state : Vision, nature and salient feature – Democratic and secular polity, federal structure : Implications for educational system .

Aims and purposes of education drawn from the normative vision.

MODULE-2: Vision of Indian Education : Four Indian thinkers

An overview of salient features of the “Philosophy and Practice” of education advocated by these thinkers.

Rabindranath Tagore : Liberationist pedagogy

M.K. Gandhi : Basic Education

Jiddu Krishnamurty : Education for Individual and social Transformation

Sir Aurobindo : integral Education

MODULE-3: Concern for Equality in Education: Concerns and Issues

Universalisation of school education

(i) Issues of (a) Universal enrollment , (b) Universal Retention, (c) Universal success

(ii) Issues of quality and equity

MODULE-4: Concern for Equality in Education

Equality of Educational opportunity

Prevailing nature and forms of inequality including Dominant and Minor groups and the related issues.

Inequality in schooling : Public-private schools, Rural-urban schools, single teachers schools and many other forms of inequalities in school systems and the process leading to disparity.

Idea of common school system

MODULE-5: Education and Development – an interface

Education for National Development : Education Commission (1964-66)

Emerging trends in the interface between:

Political process and education

Political process and education

Economic Development and Education

Social cultural – changes in Education

REFERENCES

1. Agrawal, J.C. & Agrawal S.P. (1992). Role of UNESCO in Educational, Vikas Publishing House, Delhi.
2. Anand, C.L et.al. (1983). Teacher and Education in Emerging in Indian Society, NCERT, New Delhi.
3. Govt. of India (1986). National Policy on Education, Min. of HRD, New Delhi.
4. Govt. of India (1992). Programme of Action (NPE). Min of HRD,
5. Mani, R.S. (1964). Educational Ideas and Ideals of Gandhi and Tagore, New Book Society, New Delhi.
6. Manoj Das (1999). Sri Aurobindo on Education, National Council for Teacher Education, New Delhi.
7. Mistry, S.P. (1986). Non-formal Education-An Approach to Education for All, Publication, New Delhi.
8. Mohanty, J., (1986). School Education in Emerging Society, sterling Publishers.
9. Mukherji, S.M., (1966). History of Education in India, Acharya Book Depot, Baroda.
10. Naik, J.P. & Syed, N., (1974). A Student's History of Education in India, MacMillan, New Delhi.

PRACTICAL: Mark 25 / Credit- 2

Each student is required to prepare a term paper on the educational ideas of any Indian Thinkers or on any contemporary issues on Education.

Distribution of Marks : Record=20 marks; Viva voce=05 marks

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EDUCATION

SEMESTER-II

GE-2: ASSESSMENT AND EVALUATION TECHNIQUES

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: The Measurement, Evaluation and Assessment Process

Educational Testing and Assessment : Context, Issues and Trends.

The Role of Measurement, Evaluation and Assessment in Teaching.

Instructional Goals and objectives : Foundation for Assessment.

Types of Assessment: Placement, Formative, Diagnostic and Summative.

MODULE-2: Classroom tests and Assessment

Planning classroom tests and assessment

Constructing objective test items: simple forms and multiple choice forms.

Constructing Essay type questions: Form and uses; suggestions for scoring essay questions.

MODULE-3 Alternative Techniques of Assessment

Observational Technique: Observation schedule, Anecdotal Records, Rating scales, Checklists

Self – reporting Techniques: Interview, portfolio, questionnaire and inventories.

Peer – appraisal: "Guess who" technique, sociometric technique.

MODULE-4 Processing and Reporting in Assessment

Processing qualitative evaluation data: Content Analysis

Considerations for reporting the performance

Scheme of reporting: criterion – reformed and non reformed interpretation.

Combining mark or grades over different subjects and reporting results of assessment to different users.

MODULE-5 Contemporary Trends in Assessment

Marks vs Grading system

Credit system

Concept of Continuous and Comprehensive Evaluation (CCE)

Computers in student evaluation

REFERENCES

1. Aggrawal, J.C. (1997). Essentials of Examination System, Evaluation, Tests and Measurement. New Delhi: Vikas Publishing House Pvt Ltd.
2. Banks, S.R. (2005). Classroom Assessment: Issues and Practices. Boston: Allyn & Bacon.
3. Blooms, B.S.(1956). Taxonomy of Educational Objectives. New York: Longman Green and Company
4. Cooper, D. (2007). Talk About Assessment, Strategy and Tools to Improve Learning. Toronto: Thomson Nelson
5. Earl, L.M. (2006). Assessment as Learning: Using Classroom Assessment to Maximize Student Learning. Thousand Oaks, California: Corwin Press
6. Gronlund, N.E. (2003). Assessment of student Achievement. Boston: Allyn & Bacon.
7. Kaplan, R.M. & Saccuzzo. D.P. (2000). Psychological Testing, Principles, Applications & Issues. California: Wordsworth.
8. Linn, R.L. & Gronlund, N.E. (2000). Measurement and Assessment in Teaching London: Merrill Prentice Hall.

PRACTICAL: Mark 25 / Credit- 2

Achievement Test Construction

Each student is required to construct 50 objective based objective type test items along with a blue print.

Distribution of Marks : Record=20 marks; Viva voce=05 marks

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ENGLISH
SEMESTER-I

GE-1: ACADEMIC WRITING AND COMPOSITION

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

MODULE-1: Instruments of writing I

- Vocabulary development: synonyms and antonyms; words used as different parts of speech; vocabulary typical to 'science' and 'commerce'
- Collocation; effective use of vocabulary in context

MODULE-2: Instruments of writing II

- Syntax: word order; subject-predicate; subject-verb agreement; simple, complex, compound, compound-complex sentences; structure and uses of active and passive sentences
- Common errors in Indian writing

MODULE-3: Academic writing I

- What is academic writing?
- The formal academic writing process: the 'what' and the 'how' of writing; use of cohesive and transitional devices in short and extended pieces of writing

MODULE-4: Academic writing II

- Paragraph writing: topic sentence, appropriate paragraph development ; expository, descriptive, narrative and argumentative paragraphs
- Extended pieces of writing: process development using comparison-contrast, cause and effect, argumentation, and persuasion

MODULE-5: Research writing: writing research papers and projects

- Mechanics of research writing; principles of citation; summarizing and paraphrasing
- Identifying a potential research topic; preparing a synopsis; literature review; data collection and analysis; deriving conclusions from analysis

Texts prescribed

1. K Samantray, *Academic and Research Writing: A Course for Undergraduates*, Orient BlackSwan
2. Leo Jones (1998) *Cambridge Advanced English: Student's Book* New Delhi: CUP
3. Stanley Fish (2011) *How to Write a Sentence*

Pattern of examination: End Semester examination [80 marks]

Using texts (600 -700 words), students will be tested for

- Use of vocabulary in context **05 bits X 02 marks= 10marks**
- Use of grammar in context **05 bits X 02 marks= 10 marks**
- Use of cohesive and transitional devices in one paragraph **10 bits X 02 marks=20 marks**
- Writing two paragraphs (expository/ descriptive/ narrative/argumentative) using topic sentences **2qns x 10 marks= 20marks**
- Correcting in-text citation from given input **5bits x 02 marks=10marks**
- Preparing a correct version of Works Cited page from given input **05bits x 02 marks= 10marks**

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ENGLISH

SEMESTER-II

GE-2 : MODERN INDIAN LITERATURE

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

The paper aims at introducing students to the richness and diversity of modern Indian literature written in many languages and translated into English.

MODULE-1: Historical Overview

Background, definition of the subject and historical perspectives will be covered.

MODULE-2: The Modern Indian Novel

Fakir Mohan Senapati: *Six Acres and a Third* Or U. R. Ananthamurthy: *Sanskara*

MODULE-3: The Modern Indian Short Story

Selected stories by Fakir Mohan Senapati: "Rebati", Rabindra Nath Tagore: "Post Master"
Premchand: "The Shroud", Ishmat Chughtai: "Lihaaf"

MODULE-4: Modern Indian Life Writing

Excerpts from M.K. Gandhi's *Story of My Experiments with Truth* (First two chapters), Amrita Pritam's *The Revenue Stamp* (first two chapters), *Autobiography* by Rajendra Prasad (chapter six & seven)

MODULE-5: The Modern Indian Essay

A. K. Ramanujan "Is there an Indian Way of Thinking? An Informal Essay" *Collected Essays*, OUP, 2013

"Decolonising the Indian Mind" by Namwar Singh. Tr. Harish Trivedi *Indian Literature*, Vol. 35, No. 5 (151) (Sept.-Oct., 1992), pp. 145-156

G. N. Devy's introduction to *After Amnesia*, pp. 1-5, *The G. N. Devy Reader*, Orient BlackSwan, 2009.

Suggested Readings:

1. Sisir Kumar Das, *History of Indian Literature 1910–1956, Triumph and Tragedy*, Sahitya Akademi, New Delhi, 2000
2. Amit Chaudhuri, *The Vintage Book of Modern Indian Literature*, 2004
3. M.K. Naik, *A History of Indian English Literature*, Sahitya Akademi, 2004

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HISTORY

SEMESTER-I

GE-1 : MAKING OF CONTEMPORARY INDIA

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

MODULE-1: Towards Independence and Emergence of the New State Government of India Act 1935, Negotiations for Independence and Popular Movements

Partition: Riots and Rehabilitation.

MODULE-2: Making of the Republic the Constituent Assembly

Drafting of the Constitution

MODULE-3: Integration of Princely States

MODULE-4: Non Aligned Movement

MODULE-5: Economy Society and Culture c 1950-1970s; The Land Question, Planned Economy, Industry.

ESSENTIAL READINGS

1. Granville Austin, *Indian Constitution: Cornerstone of a Nation*, New Edition, OUP, 2011_Francine Frankel, *India's Political Economy*,
2. 1947-2004, New Delhi: Oxford University Press, 2006.
3. Paul Brass, *The Politics of India Since Independence*, Cambridge:
4. Cambridge University Press, 1994. Ram Chandra Guha, *India after*
5. Gandhi: *The History of the World's Largest Democracy*, New Delhi:
6. Picador, 2007

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HISTORY

SEMESTER-II

GE-2: HISTORY OF INDIA (C. 1857 - 1950)

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

MODULE-1: Cultures changes and Social and Religious Reform Movements:

The advent of printing and its implications

Reform and Revival: Brahma Samaj, and Ramakrishna and Vivekananda, Arya Samaj, Caste: sanskritisation and Westernization trends

MODULE-2: Nationalism: Trends up to 1919:

Formation of INC, Moderates and extremists trends in INC.; Swedish movement Revolutionaries

MODULE-3: Gandhian nationalism after 1919: Ideas and Movements:

Mahatma Gandhi: his Perspectives and Methods

Rowlett Act, Jallianwala Bagh Massacre, Non- Cooperation, Civil Disobedience, Quit India Formation and Role of INA

States people movements and Integration of princely states

MODULE-4: Communalism:

Ideologies and practices, RSS, Hindu Maha Sabha, Muslim League.

MODULE-5: Independence and Partition

Negotiations for independence; Indian Independence Act 1947; Partition

ESSENTIAL READINGS

Judith Brown, Gandhi's rise to Power, 1915-22.

Paul Brass, The Politics of India Since Independence, OUP, 1990.

Bipan Chandra, Nationalism and Colonialism in Modern India, 1979.

Bipan Chandra, Rise and Growth of Economic Nationalism in India.

Mohandas K. Gandhi, An Autobiography or The Story of My Experiments with Truth.

Ranajit Guha, ed., A Subaltern Studies Reader.

Peter Hardy, Muslims of British India.

Mushirul Hasan, ed., India's Partition, Oxford in India Readings.

John R. McLane, Indian Nationalism and the Early Congress.

Jawaharlal Nehru, An Autobiography.

Gyanendra Pandey, The Construction of Communalism in colonial north India.

Sumit Sarkar, Modern India, 1885-1947.

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SANSKRIT

SEMESTER-I

GE-1: MORAL TEACHINGS AND BASICS OF SANSKRIT

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

(‘a’ karanta, ‘i’ karanta, ‘ī’karanta, ‘u’karanta, ‘ū’ karanta, ‘in’ bhaganta, Mātr, Pitr, Asmad, Yusmad, Tad(sabdarupas).Lat, Lañ, Vidhiliñ, Lṛt, Lot and Litlakaras of Path,Ni, Kr, Sev, Han, Pā, Dā, Śru, Śī and Krīñ in the form of Ātmanepada, Parasmaipada or Ubhayapada whichever is applicable. (Dhaturupas)

MODULE-1 & 2: *Hitopodeśa* (From *Kathamukha* to *Gṛdhravidalakatha*) 30 Marks

Long Question-1

15 Marks

Short Questions-3

5×3= 15 Marks

MODULE-3 & 4: *Yaksaprasna of Mahabharata*

30 Marks

Long Question-1

15 Marks

Explanation - 1

8 Marks

Textual Translation of a Verse

7 Marks

MODULE-5: *Śabdarupa & Dhaturupa*

20 Marks

Śabdarupa -5

2×5= 10 Marks

Dhaturupa -5

2×5= 10 Marks

Books for Reference:

1. *Hitopadesah(Mitralabhabh)* (Ed.) Kapildev Giri, Chaukhamba Publications, Varanasi.
2. *Hitopadesah (Mitralabhabh)* (Ed.) N.P. Dash and N.S. Mishra, Kalyani Publishers, New Delhi
3. *Vyakaranadarpana*, The Odisha State Bureau of Text Book Preparation and Production, Bhubaneswar, 2013
4. Critical edition of the *Mahabharata*, (Ed.) V.S. Sukthankar, BORI, Pune *Mahabharata*, Gitapress, Gorakhpur

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SANSKRIT

SEMESTER-II

GE-2: POETRY & HISTORY OF SANSKRIT LITERATURE (SANSGE-2)

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

1. Meghadutam- (Purvamegha)	50 Marks
MODULE-1: Long Question-1	15 Marks
MODULE-2: Short Questions-2	15 Marks (7 ½ X 2)
MODULE-3: i) Explanation of One Verse ii) Translation of One Verse	12 Marks 08 Marks
2. History of Sanskrit Literature-II	30 Marks
MODULE-4: (<i>Gitikavyas&Khandakavyas</i>) Long Question-1 Short Question-1	10 Marks 05 Marks
MODULE-5: (<i>Gadyakavyas, Kathasahitya</i>) Long Question-1 Short Question-1	10 Marks 05 Marks

Books for Reference:

1. *Meghadutam* (Ed.) S.R. Ray, Sanskrit Pustak Bhandar, 38 Cornwallis St., Calcutta
2. *Meghadutam* (Ed.) M.R. Kale, Motilal Banarsidass, Delhi
3. *Meghadutam* (Ed.) Radhamohan Mahapatra, Books and Books, Vinodvihari, Cuttack, 1984
4. *Meghadutam* (Ed.) B.S. Mishra, Vidyapuri, Cuttack, 1st Edn-1999
5. *Samskrta Sahitya ka Itihasa*, Baladeva Upadhyaya, Choukhamba, Varanasi.
6. *Samskrta Sahitya ka Ruparekha*, Vacaspati Goreilla, Choukhamba Vidyabhavan, Varanasi.
7. *Samskrta Sahitya Itihasa*, H.K. Satapathy, Kitab Mahal, Cuttack

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SOCIOLOGY

SEMESTER-I

GE-1: INTRODUCTION TO SOCIOLOGY

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

MODULE-1: Sociology: Definition and Subject matter, Nature and Scope, Emergence of Sociology, Sociology and its relationship with Anthropology, Political Science, Economics, and History

MODULE-2: Basic Concepts: Society, Culture, Community, Institutions, Association, Social Structure, Status and Role, Norms and Values, Folkways and Mores

MODULE-3: Individual and Society : Individual and society, Socialization, Stages and agencies of Socialization, The Concept of Group : Types of Groups – Primary and Secondary groups, In-Group and Out-group, Reference Group

MODULE-4: Social Stratification: Caste, Class, Power, Gender and Race. Theories of Stratification – Functionalist, Marxist, Weberian. Social mobility and its determinants.

MODULE-5: Social Control: Meaning and types, Formal and Informal social control, Agencies of Social control

Social Processes: Associative and Dissociative processes – Cooperation, Assimilation, accommodation, Competition, and conflict

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SOCIOLOGY

SEMESTER-II

GE-2: INDIAN SOCIETY

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

MODULE-1 : Composition of Indian Society : Religious composition, ethnic composition, caste composition. Unity in Diversities. Threats to National Integration: Communalism, Castesim, Linguism and Regionalism.

MODULE-2: Historical moorings and bases of Hindu Social Organization, Varna, Ashrama and Purushartha. Doctrine of Karma.

MODULE -3 : Marriage and Family in India. Hindu marriage as Sacrament, Forms of Hindu Marriage. The Hindu joint family: Patriarchal and Matriarchal systems. Hindu Marriage Act of 1955. Changes in Marriage and Family.

MODULE-4 : The Caste system in India: Origin, Features and Functions. Caste and Class, The Dominant Caste, Changes in Caste system, Caste and Politics in India. Constitutional and legal provisions for the Scheduled Castes, Scheduled Tribe.

MODULE-5: Social Change in Modern India: Sanskritization, Westernization, Secularization, and Modernization.

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ANTHROPOLOGY

SEMESTER-III

GE-3: ANTHROPOLOGY OF RELIGION, POLITICS AND ECONOMY

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Anthropological approaches to understand religion- magic, animism, animatism, totemism, naturism; witchcraft and sorcery; Religious specialists: shaman, priests, mystics;

MODULE-2: Overview of Anthropological Theories of Religion; Religion as the sacrality of ecological adaptation and socialness.

MODULE-3: Economic institutions: principles of production, distribution, and consumption in simple and complex societies; critical examination of relationship between economy and society through neoclassical, substantivist, and neo-Marxist approaches, various forms of exchange: barter, trade and market; Forms of currencies; reciprocities: generalized, balanced and negative.

MODULE-4: Political institutions: concepts of power and authority; types of authority; state and stateless societies; law and justice in simple and complex societies; the prospects for democracy and tolerance among and within the world's diverse civilizations; the meaning and sources of identity in complex contemporary societies; the origins of modern politics, its institutions, and cultures, both Western and non-Western.

MODULE-5: Interrelationship between religion, politics and economy; religious conversion and movements, emergence of new religious sects in the global order.

PRACTICAL: Mark 25 / Credit- 2

Case study of any of the social institute (religion, economic, political) with respect to culture perspective.

Suggested Readings:

2. Durkheim E. (1986). The elementary forms of the religious life, a study in religious sociology. New York:Macmillan.
3. Benedict A. (2006). Imagined Communities: Reflections on the Origin and Spread of Nationalism. Verso
4. Gledhill J. (2000). Power and Its Disguises: Anthropological Perspectives on Politics. 2nd ed. London:Pluto Press.
5. Ellis F. (2000). A framework for livelihood analysis. In Rural Livelihoods and Diversity in Developing Countries . Oxford: Oxford University Press.
6. Henrich J, Boyd R, Bowles S, Camerer C, Fehr E, Gintis H, McElreath R, Alvard M et al. (2005). 'Economic Man' in cross-cultural perspective: Behavioral experiments in 15 small-scale societies. Behavior and Brain Science. 28(6):795-815;
7. Lambek. M. (2008) A Reader in the Anthropology of Religion.
8. Eller JD. (2007). Introducing Anthropology of Religion. New York: Routledge.
9. Glazier SD. (1997). Anthropology of Religion: A Handbook. Westport, CT: Greenwood Press.
10. Barbara M. (2011). Cultural Anthropology. New Jersey: Pearson Education.
11. Ember CR. (2011). Anthropology. New Delhi: Dorling Kindersley.
12. Malinowski B. (1922) Argonauts of the Western Pacific. London: Routledge.
13. Polyani K. et al (1957), Trade and Market in the Early Empires. Chicago: Henry Regnery Company.
14. Balandier G. (1972). Political Anthropology. Middlesex: Penguin.



ANTHROPOLOGY

SEMESTER-IV

GE-4: TRIBAL CULTURES OF INDIA

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Concept of tribes and its problematic nature, General and specific characteristics of tribes, Classification and distribution of tribes based on their economy, occupation and religion,

MODULE-2: Racial elements among the tribes, Scheduled and non-scheduled categories of tribes, Particularly Vulnerable Tribal Groups (PVTGs).

MODULE-3: Tribe- caste continuum, Gender and Tribe, Distribution of tribes in India.

MODULE-4: Tribes: Nomenclature- emic and etic differences; Tribal movements, Problems of tribal development.

MODULE-5: Forest policies and tribes, Migration and occupational shift, Tribal arts and aesthetics Displacement, rehabilitation and social change Globalization among Indian tribes.

PRACTICAL: Mark 25 / Credit- 2

1. Distribution of Indian Tribes: PVTGs, ST
2. Location of different tribes on the map of India
3. Write an annotated bibliography on any one tribe
4. Write the social structure of any one tribe of India

Suggested Readings:

1. Behera, D.K and Georg pfeffer. Contemporary Society Tribal Studies, Volume I to VII. New Delhi: Concept Publishing Company
2. Georg Pfeffer. Hunters, Tribes and Peasant: Cultural Crisis and Comparison. Bhubaneswar: Niswas.
3. Vidarthy, L.P. and Rai. Applied Anthropology in India.
4. Vidarthy.L.P. and B.N. Sahay . Applied Anthropology and Development in India. New Delhi: National Publishing House



ECONOMICS

SEMESTER-III

GE-3: FUNDAMENTALS OF ECONOMICS

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

MODULE-1: Meaning of demand, law of demand, determinants of market demand, elasticity of demand, degrees and elasticity of demand, determinants of elasticity of demand, Indifference curve: meaning, properties.

MODULE-2: Meaning of costs, types, short run cost curves, Revenues, types of revenue in different market structure.

MODULE-3: Meaning of market, types of market, equilibrium price determination in perfect competition market, monopoly market, monopolistic competition market.

MODULE-4: Meaning of national income, concepts of national income / identities, measurement of national income by income, product and expenditure methods, difficulties of measurement of national income.

MODULE-5: Meaning of inflation, types, causes and effects of inflation, meaning of deflation, types, causes and effects of deflation, methods of controlling inflation and deflation (monetary measures and fiscal measures)

Basic Readings:

1. Introductory Economics: by Siddique & Siddique, Laxmi Publication, New Delhi.
2. Principles of Micro Economics: by H.L.Ahuja, S.Chand Publication.
3. Macro Economic Analysis: by R.D. Gupta.
4. Monetary Economics: By R.R.Paul.

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ECONOMICS

SEMESTER-IV

GE-4: INDIAN ECONOMY

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

MODULE-1: Current challenges: Features of Indian economy,

Population Explosion: causes and effects.

Poverty: Definition and estimate, poverty line, poverty alleviation programmes.

Inequality: Income and Regional inequality, causes and corrective measures.

Unemployment: Concepts, Measurement, Types, Causes and Remedies.

MODULE-2: Agricultural development in India

Indian Agriculture: nature, importance, trends in agricultural production and productivity, factors determining production, land reforms, new agricultural strategies, and green revolution, rural credit, agricultural marketing and warehousing.

MODULE-3: Industrial development in India

Trends in industrial output and productivities, Industrial Policies of 1948, 1956, 1977 and 1991. Industrial licensing policies-MRTP Act, FERA and FEMA, Growth and Problems of SSIs, Industrial Sickness, Industrial Finance, Industrial Labour.

MODULE-4: External Sector

Foreign trade: role, composition and direction of India's foreign trade, trends of export and import in India, export promotion versus import substitution, balance of payment of india, India's trade policies, **Foreign capital** : FDI, AID and MNCs.

MODULE-5: Indian monetary and credit system

Role of credit, sources of credit, role of RBI, Indian stock exchange: its role, importance and functions.

Basic Readings:

1. Indian Economy: by S.K.Mishra and V.K.Puri, Himalaya Publishing House, Mumbai.
2. Indian Economy Since Independence: by U.Kapila.
3. Indian Economy: by R.Dutt and K.P.M. Sundharam.

4. Misra, S. K. and Puri V. K. Indian Economy — Its Development Experience. Himalaya Publishing House, Mumbai
5. Agarawala, A. N. Indian Economy, New Age Publications, New Delhi
6. Acharya, S. and Mohan, R. (Eds.) (2010): India's Economy: Performance and Challenges, Oxford University Press, New Delhi.
7. Kapila U. *Indian economy since Independence*. Academic Foundation, New Delhi

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POLITICAL SCIENCE

SEMESTER-III

GE-3: NATIONALISM IN INDIA

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

MODULE-1: Nationalism; Approaches to the study of Nationalism in India.; Nationalist and Imperialist Interpretations.; Marxist and subaltern Interpretations

MODULE-2: Major Social and Religious movements in 19th century; Raja Rammohan Roy and Dayananda Saraswati; Jyotiba Phule and Iswar Chandra Bidyasagar.

MODULE-3: Nationalist Politics and Expansion of its Social Base; Phases of Nationalist Movement: Liberal Constitutionalists (Moderates), Swadeshi (Extremists) and the Radicals. Gandhi and Mass Mobilisation, Congress socialists, Communists.

MODULE-4: Social Movements; The Women's Question: Participation in the National Movements, Its Impact (Role of Women in Indian Nationalism).

Anti Brahmanical movements, peasant and tribal.

MODULE-5: Partition and Independence; Communalism in Indian Politics: Causes and Impact.

The Two-Nation Theory and Partition: Iqbal Sayeed Ahmed Khan, Jinnah and The Mountbatten Plan.

Reading List

S. Bandopadhyay, (2004) *From Plassey to Partition: A History of Modern India*, New Delhi: Orient Longman, pp. 184-191.

R. Thapar, (2000) 'Interpretations of Colonial History: Colonial, Nationalist, Post-colonial', in P. DeSouza, (ed.) *Contemporary India: Transitions*, New Delhi: Sage Publications, pp. 25-36.

S. Bandopadhyay, (2004) *From Plassey to Partition: A History of Modern India*, New Delhi: Orient Longman, pp. 139-158, 234-276.

A. Sen, (2007) 'The idea of Social Reform and its Critique among Hindus of Nineteenth Century India', in S. Bhattacharya, (ed.) *Development of Modern Indian Thought and the Social Sciences*, Vol. X. New Delhi: Oxford University Press.

S. Bandopadhyay, (2004) *From Plassey to Partition: A History of Modern India*. New Delhi: Orient Longman, pp. 279-311.

S. Sarkar, (1983) *Modern India (1885-1947)*, New Delhi: Macmillan,

P. Chatterjee, (1993) 'The Nation and its Pasts', in P. Chatterjee, *The Nation and its Fragments: Colonial and Postcolonial Histories*. New Delhi: Oxford University Press, pp. 76-115.

A. Jalal, and S. Bose, (1997) *Modern South Asia: History, Culture, and Political Economy*. New Delhi: Oxford University Press, pp. 135-156.

A. Nandy, (2005) *Rashtravad banam Deshbhakti* Translated by A. Dubey, New Delhi: Vani Prakashan. pp. 23-33. (The original essay in English is from A. Nandy, (1994) New Delhi: Oxford University Press, pp.18.)

Additional Readings:

B. Chakrabarty and R. Pandey, (2010) *Modern Indian Political Thought*, New Delhi: Sage Publications.

P. Chatterjee, (1993) *The Nation and its Fragments: Colonial and Postcolonial Histories*, New Delhi: Oxford University Press.

R. Pradhan, (2008) *Raj to Swaraj*, New Delhi: Macmillan (Available in Hindi).

S. Islam, (2006) *Bharat Mein Algaavaad aur Dharm*, New Delhi: Vani Prakashan.

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POLITICAL SCIENCE

SEMESTER-IV

GE-4: GANDHI AND CONTEMPORARY WORLD

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

MODULE-1: Gandhi and Legacy

Gandhi and Anti-racism , Gandhi in South Africa, Gandhi and Martin Luther
Gandhi and Freedom struggle: Concept of swaraj, Non-cooperation Movement, Civil
Disobedience Movement, Quit India Movement

MODULE-2: Gandhi and Techniques:

Non-Violence, Swadeshi, Concept of Satyagraha, Fasting and Picketing
Communal harmony, Women Emancipation and Critique Caste.

MODULE-3: Gandhi and Mass Mobilisation

Peasant mobilization: Champaran and Kheda.
Gandhi and Democracy.

MODULE-4: Gandhi and Communitarian values

Role of state & participatory democracy, Panchayati Raj system.
Modernization: Ahmedabad Mill strike, concept of Trusteeship and Narmada Bachao Andolan.

MODULE-5: Relevance of Gandhi

Jayaprakash Narayan: Total Revolution.
Vinoba Bhave: Bhoodan Movement.

READING LIST

- B. Parekh, (1997) 'The Critique of Modernity', in *Gandhi: A Brief Insight*, Delhi: Sterling Publishing Company, pp. 63-74.
- K. Ishii, (2001) 'The Socio-economic Thoughts of Mahatma Gandhi: As an Origin of Alternative Development', *Review of Social Economy*. Vol. 59 (3), pp. 297-312.
- D. Hardiman, (2003) 'Narmada Bachao Andolan', in *Gandhi in his Time and Ours*. Delhi: Oxford University Press, pp. 224- 234.
- A Baviskar, (1995) 'The Politics of the Andolan', in *In the Belly of the River: Tribal Conflict Over Development in the Narmada Valley*, Delhi: Oxford University Press, pp.202-228.
- R Iyer, (ed) (1993) 'Chapter 4' in *The Essential Writings of Mahatma Gandhi*, New Delhi: Oxford University Press.
- R. Ramashray, (1984) 'Liberty Versus Liberation', in *Self and Society: A Study in Gandhian Thought*, New Delhi: Sage Publication.
- B. Parekh, (1997) 'Satyagrah', in *Gandhi: A Brief Insight*, Delhi: Sterling Publishing Company, pp. 51-63.
- D. Dalton, (2000) 'Gandhi's originality', in A. Parel (ed) *Gandhi, Freedom and Self-Rule*, New Delhi: Lexington Books, pp.63-86.
- D. Hardiman, (1981) 'The Kheda Satyagraha', in *Peasant Nationalists of Gujarat: Kheda District, 1917-1934*, Delhi: Oxford University Press, pp. 86-113.
- J. Brown, (2000) 'Gandhi and Human Rights: In search of True humanity', in A. Parel (ed) *Gandhi, Freedom and Self-Rule*, New Delhi: Lexington Books, pp. 93-100.
- R. Iyer, (2000) 'Chapter 10 and 11', in *The Moral and Political Thought of Mahatma Gandhi*, New Delhi: Oxford University Press, pp. 251-344



ODIA
SEMESTER-III
GE-3: ODIA

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

GE-3 : ସାହିତ୍ୟ ଅଧ୍ୟୟନ

୧ମ ଉପାଂଶ : ପ୍ରବନ୍ଧ ଚୟନ (ସଂ ଉତ୍କଳ ବିଶ୍ୱବିଦ୍ୟାଳୟ)

ପାଠ୍ୟ : ଅନନ୍ତ ପ୍ରେମ - ବିଶ୍ୱନାଥ କର; ସାରଳା ସାହିତ୍ୟ ବଂଶଧର ମହାନ୍ତି; ସୂର୍ଯ୍ୟଧର କର ଛାନ୍ଦ - ଚନ୍ଦ୍ରଶେଖର ରଥ

୨ୟ ଉପାଂଶ : କବିତା ଚୟନ (ସଂ ଉତ୍କଳ ବିଶ୍ୱବିଦ୍ୟାଳୟ)

ପାଠ୍ୟ : କଞ୍ଚୁକିର ଭବନୀ ରାଧାନାଥ ରାୟ; ତିନୋଟିସନେଟ - ମାୟାଧର ମାନସିଂହ; ସମ୍ଭ୍ରମ ଓ ମୁଁ ସୌଭାଗ୍ୟ କୁମାର ମିଶ୍ର

୩ୟ ଉପାଂଶ : ଅବବୋଧ ପରୀକ୍ଷଣ - (ଗୋଟିଏଥ ପଦ୍ୟ ପରିଚ୍ଛେଦ ୦୦ ଶବ୍ଦ ମଧ୍ୟରେ ଅଥବା ଛାନ୍ଦ କବିତାଟିଏ ପଢ଼ିବ ।

ତତ୍ପରେ ପ୍ରଶ୍ନ ଅବବୋଧ ପରୀକ୍ଷଣ ଉତ୍ତର ପାଇଁ ଆଗତ ହେବ ।

୪ର୍ଥ ଉପାଂଶ : ପ୍ରବଚନ/ଛାନ୍ଦ ଆଶ୍ରିତ ସର୍ଜନାତ୍ମକ ଛାନ୍ଦ (ଗୋଟିଏଥ ପ୍ରବଚନ / କବିତା / ଛାନ୍ଦ ଆଗତ କରାଯିବ । ଓଡ଼ିଆ ଭାଷାକୁ

୨୦୦ଟି ଶବ୍ଦ ମଧ୍ୟରେ ସଂପ୍ରସାରଣ କରି ଲେଖିବାକୁ ଶିକ୍ଷା ଦିଆଯିବ)

୫ମ ଉପାଂଶ : ଶବ୍ଦ ଅର୍ଥ ଓ ତାହାର ଉଚ୍ଚାରଣ ଲିଖନ (ସଂସ୍କୃତ ଅର୍ଥ/ପ୍ରତ୍ୟୟକୁ ଅର୍ଥ/ବଚନଗତ ଅର୍ଥ/ସମାସ-

ଲିଙ୍ଗ-ବନାନଗତ ଅର୍ଥ ଓ ସେଥିରୁ ନିର୍ଦ୍ଧାରଣ)

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ODIA
SEMESTER-IV

(CREDITS: 6, Theory=6)

(Total Marks: 100, Mid Sem=15, Tutorial=05, Term End=80: Duration: 3 hrs.)

GE-4: ଗାମ୍ୟ କୈତ୍ରିକ ପଦ୍ୟ ଓ ଗଦ୍ୟ

୧ମ ଉପାଂଶ : ପଲ୍ଲୀ କୈତ୍ରିକ କବିତା

ଗ୍ରାମ ଖଳା - ନବକିଶୋର ବଳ; ଛୋଟ ମୋର ଗାଁଟି ସଜ୍ଜିଦାନନୀରୁ ଉତ୍ପନ୍ନ; ଗ୍ରାମପଥ - ବିନୋଦ ନାୟକ

୨ୟ ଉପାଂଶ : କୃଷି ଓ ଗ୍ରାମ୍ୟକୈତ୍ରିକ ଉପନ୍ୟାସ

ମାଟିର ମଣିଷ କାଳିନ୍ଦୀ ଚରଣ; ଅଥବା ପଠି ଗୋଟେ ଗାଁ ଥିଲା ରଣ୍ଡା ରା

୩ୟ ଉପାଂଶ : ଗାମ୍ୟକୈତ୍ରିକ ଗଦ୍ୟ

ଗାଁ ମଞ୍ଜିସି ଦୁରେକୃଷ୍ଣ ମହତାବ, ୧ମ ଭାଗ, ୩ଟି ପ୍ରବନ୍ଧ; ଅଥବା ଗାଁର ତାଳ - ଭୁବନେଶ୍ୱର ବେହେରା, ପ୍ରଥମ ତିନୋଟି ପ୍ରବନ୍ଧ

୪ର୍ଥ ଉପାଂଶ : ଓଡ଼ିଆ ଜଗତମାଳି

୫ମ ଉପାଂଶ : ଓଡ଼ିଆ ପର୍ବପର୍ବାଣି ଆଖ୍ୟାୟିକା, ରଜ ପର୍ବ)

ସହାୟକ ଗ୍ରନ୍ଥାଳୟ :

୧- ପ୍ରାୟୋଗିକ ଭାଷା ବିଜ୍ଞାନର ବିଶିଷ୍ଟ ଗ୍ରନ୍ଥ : ପଟ୍ଟନାୟକ କେ ବି, ଓଡ଼ିଆ ଭାଷା ପ୍ରଣୟନ ଓ ପ୍ରକାଶନ ସଂସ୍ଥା, ଭୁବନେଶ୍ୱର

୨- ସଂଯୋଗ ଅନୁକ୍ରମ : ଦ୍ୱିପାଠୀ ସନ୍ତୋଷ, ଲାଲ, କଟକ

୩- କବିତାର ମାନବିକ : ମହାନ୍ତି ଜାନକୀ ବଲ୍ଲଭ, ପ୍ରେମ ସମ୍ବନ୍ଧୀୟ ଗ୍ରନ୍ଥକଳା

୪- ଓଡ଼ିଆ ଭାଷା ବିଭବ : ମହାପାତ୍ର ବିଜୟ ପ୍ରସାଦ, ବିଦ୍ୟାଳୟ, କଟକ

୫- ବୃତ୍ତି ଓ ମୋ ପୋଷଣ : ମହାନ୍ତି ପଞ୍ଚାନନ, ଭୁବନେଶ୍ୱର

୬- ପ୍ରାଚୀନ ପୋଥି ଓ ସଂପାଦନା ପଦ୍ଧତି ଓ ଅନୁବାଦ ଲେଖକ - ପଟ୍ଟନାୟକ, ଅକ୍ଷୟ, ଭୁବନେଶ୍ୱର

୭- ମଞ୍ଜି ଓ ନାଟକର କଳାକୌଶଳ - ସାହୁ ନାରାୟଣ, ଓଡ଼ିଶା ରାଜ୍ୟ ପାଠ୍ୟପୁସ୍ତକ ଓ ପ୍ରକାଶନ ସଂସ୍ଥା

୮- ଶବ୍ଦର ଆକାଶ ପୃଷ୍ଠାର ଦିଗ୍‌ଜୟ - ଶତପଥୀ ରବି, କଟକ

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GEOGRAPHY

SEMESTER-I

CORE-1: GEOMORPHOLOGY - I

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Definition and scope of geomorphology, Fundamental Concept of Geomorphology and recent changes; Structure and composition of the Earth's interior: Thermal and Physical State of the Earth's Interior with special reference to Seismological Evidence, Zoning (Sues's model) Crust, mantle, Core; Theories of Isostasy: Models of Pratt and Airy

MODULE-2: Rocks: Origin, characteristics, and Classification (Igneous, Sedimentary, Metamorphic); Earth Movement: Eustatic and Isostatic, Endogenetic and Exogenetic; Structure and landform: Types of Folds and Faults, Rift Valleys, Horst and Graben; Earthquake: Distribution, Characteristics of Seismic Waves; Volcanism: Causes and Effects, Types of Volcano, Volcanic Landform (Extrusive and Intrusive)

MODULE-3: Earth movement: Continental Drift Theory by Wegner and related evidences; Sea Floor Spreading, Plate Tectonics (Concept, Distribution of Plates, Types of Plate; Plate Convergence and Divergence, Causes of Plate Movement); Geosynclines, concept, classification, and stages of mountain building; Kober's theory of mountain building and Convection Current Theory of Holmes

MODULE-4: Factors and Types of Weathering; Mass wasting: Meaning and Concept, Classification and Factors, Types of Mass movement; Morphological evolution of landforms: Davis and Penck, King

MODULE-5: Evolution of Land Forms: Fluvial processes and related landforms; Underground water and Karst topography; Aeolian landscape: depositional and erosional features; Glacial erosion: Erosional and depositional landforms; Wave and tidal action along the coast and resultant landforms

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. Kale V. S. and Gupta A., 2001: Introduction to Geomorphology, Orient Longman, Hyderabad.
5. Knighton A. D., 1984: Fluvial Forms and Processes, Edward Arnold Publishers, London.
6. Richards K. S., 1982: Rivers: Form and Processes in Alluvial Channels, Methuen, London.
7. Selby, M.J., (2005), Earth's Changing Surface, Indian Edition, OUP
8. Skinner, Brian J. and Stephen C. Porter (2000), The Dynamic Earth: An Introduction to physical Geology, 4th Edition, John Wiley and Sons
9. Thornbury W. D., 1968: Principles of Geomorphology, Wiley.
10. Gautam, A (2010): Bhautik Bhugol, Rastogi Publications, Meerut
11. Tikkaa, R N (1989): Bhautik Bhugol ka Swaroop, Kedarnath Ram Nath, Meerut
12. Singh, S (2009): Bhautik Bhugol ka Swaroop, Prayag Pustak, Allahabad

PRACTICAL: Mark 25 / Credit- 2

- A. Study of symbols and techniques of representation of relief features and Geomorphic Interpretation of topographic Maps.
 1. Representation of Relief features: Hill, Plateau, Valley, Col, Knoll, Ridge, Escarpment
 2. Drawing of Serial, superimposed, composite and projected profiles.
 3. Drawing long profile and cross profile of a river
 4. Study of drainage pattern; dendritic, trellised, radial using stream order and bifurcation ratio.
 5. Geomorphological interpretation of an area from toposheet
 6. Measurement of drainage density and texture of topography
 7. Use of Rotameter and planimeter and graphic methods in measurement of area and length
- B. Determination of Slope and Relief variation
 1. Slope of an area using Wentworth's Method
 2. Preparation of Relief Map
- C. Interpretation of Geological Maps: Dip, Strike, bedding plain, unconformity, disconformity, outcrop, geological structure (Fold & Fault), dyke, sills, geological history and stratigraphic succession.

Record

Viva Voce



CORE-2: PRINCIPLES OF CARTOGRAPHY - I

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Nature and scope of Cartography and History of cartography; Shape and dimension of the Earth; Geographic coordinates: Latitudes and Longitudes, Grid reference systems, International date line, Local time, GMT and IST; Concept of true north and magnetic north

MODULE-2: Scale: Maps and Types of maps: large scale and small scale maps, Cadastral Maps, Topographical Maps, wall maps, Atlas Map, three dimensional / raised relief maps; Map Scale and their function: Statement, Graphical, R.F., Diagonal Scale, Vernier Scale; Principles of Map enlargement and reduction, determining scale of a map; Topographical maps - India and adjacent series, Numbering system of topographical maps; Conventional Signs, Symbols of physical and cultural themes on maps, use of color schemes in maps

MODULE-3: Map Projection: Properties and use of Map projection: Types and characteristic of map projection; Properties and uses of following projections:

- (i) Conical Projections: Simple, one standard, two standard parallel, Bonne's, Polyclonic, Lambert's projection.
- (ii) Zenithal Projections: Stereographic, Orthographic and Gnomonic
- (iii) Cylindrical Projections : Simple, equal area,
- (iv) Conventional Projections: Mercator's Projection, Mollweid's Pojection, Sinusoidal

MODULE-4: Ground Survey and positioning

Principles of surveying: measuring angle, altitude and distance, Traditional survey methods and automated survey systems; Principles of Prismatic compass and Plane table surveying and its types; Use of Leveling, relative height determination and contouring; Geodetic survey: use of theodolite, determination of height; GPS and DGPS, Total Station in ground survey

MODULE-5: Map Design and cartographic communication

Cartographic design: Function and scope, Theory of visual perception, Concept of symbolization: Point, Line and Area symbol, Cartographic limitation; Map lettering and toponomy: Style of lettering, size of lettering, form of lettering, color and background, positioning, mechanical lettering; Mapping the terrain: Methods of representation, Spot height, Hachuring, Contouring, Shedding, Printing and color; Color theory and models in maps: nature of color vision, color modeling system, electronic display of colors: RGB, HLC, HVC, Color and pattern creations.

Reading List

1. Anson R. and Ormelling F. J., 1994: International Cartographic Association: Basic Cartographic Vol. Pregmen Press.
2. Gupta K.K. and Tyagi, V. C., 1992: Working with Map, Survey of India, DST, New Delhi.
3. Mishra R.P. and Ramesh, A., 1989: Fundamentals of Cartography, Concept, New Delhi.
4. Monkhouse F. J. and Wilkinson H. R., 1973: Maps and Diagrams, Methuen, London.
5. Rhind D. W. and Taylor D. R. F., (eds.), 1989: Cartography: Past, Present and Future, Elsevier, International Cartographic Association.
6. Robinson A. H., 2009: Elements of Cartography, John Wiley and Sons, New York.
7. Sharma J. P., 2010: Prayogic Bhugol, Rastogi Publishers, Meerut.
8. Singh R. L. and Singh R. P. B., 1999: Elements of Practical Geography, Kalyani Publishers.
9. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi

PRACTICAL: Mark 25 / Credit - 2

- A. Concept of Spheroid and Geoid: Coordinate and grid reference system
 1. Location of place on grid reference system using 8 digit, 12 digit and 16 digit system
 2. Drawing of: Simple Cylindrical Projection; Cylindrical Equal Area; Simple conical projection with one standard parallel; Bonne's Projection; Polyconic projection; Gnomonic projection; Orthographic projection; Stereographic Projection; Mercator's Projection

Record

Viva Voce

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SEMESTER-II

CORE-3: CLIMATOLOGY

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Atmospheric Composition and structure — Variations with Altitude, Latitude and Season; Weather and climate: Definition, elements and factors of weather and climate.; Insolation and Temperature: Factors affecting Insolation and distribution of Temperature; Global Heat Budget

MODULE-2: Atmospheric Pressure and Winds - Atmospheric pressures and pressure belts of the world; Coriolis forces (concept and effects); Forces affecting winds; Planetary, local and monsoon winds, its characteristics; Jet Stream - their origin

MODULE-3: Atmospheric moisture: Evaporation, Humidity and condensation; Fog and Clouds; Types of precipitation, Stability and Instability; Koppen's classification of climate; Thornthwaites classification of climate.

MODULE-4: Temperature Inversion; Air mass and fronts: Concepts, classification and properties of Air mass; Frontogenesis, types and weather associated with fronts; Global warming: causes, its consequences and controlling measures

MODULE-5: Weather disturbances: Tropical Cyclones; Extra Tropical Cyclones (temperate cyclones); Monsoon — concepts and theories of the origin of monsoon Origin; Origin and Mechanism of Indian monsoon

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
4. Lutgens F K Tarbuck E. J and Tasa D 2009 The Atmosphere An Introduction to Meteorology. Prentice-Hall, Englewood Cliffs. New Jersey
5. Oliver J. E and Hidore J. J.. 2002: Climatology: An Atmospheric Science, Pearson Education, New Delhi.
6. Trewartha G. T. and Horn L H., 1980 An Introduction to Climate. McGraw-Hill.
7. Gupta L S (2000), Jalvayu Vigyan, Hindi Madhyam Karyanvay Nidishalya. Delhi Vishwa Vidyalaya. Delhi.
8. Lal. D S (2006): Jalvayu Vigyan, Prayag Pustak Bhavan, Allahabad.
9. Vatal, M (1986): Bhautik Bhugol, Central Book Depot, Allahabad.
10. Singh. S (2009): Jalvayu Vigyan, Prayag Pustak Bhawan, Allahabad

PRACTICAL: Mark 25 / Credit- 2

- A. Use of weather Maps
 1. Use of symbols of various weather parameters in Indian weather maps
 2. Interpretation of Weather map for understanding weather conditions
- B. Monitoring weather elements
 1. Distribution of temperature/ pressure/ humidity on maps by isopleth techniques
 2. Distribution of rainfall on maps by choropleth techniques
 3. Distribution of monthly variation of temperature/ rainfall on maps by bars and graphs
 4. Use of moving average in analyzing climatic trends (Temperature, rainfall, Humidity)
 5. Construction of wind Rose for displaying wind direction and wind velocity of a place
- C. Construction of
 1. Construction of Climographs
 2. Construction of Hythergraphs
 3. Construction of Ergographs
- D. Record
- E. Viva Voce

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CORE-4: THEMATIC CARTOGRAPHY

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Concept and significance of thematic mapping; Classification and types of thematic maps; Problems in thematic mapping-Atlas mapping, socio-economic mapping; Principles of map design; Goal and process of map design; Element of map design

MODULE-2: Definition, objective and principles of thematic mapping; Diagrammatic representation of data; Flow map, line graph, bar diagram

MODULE-3: Thematic mapping technique; Quantitative technique: Thematic choropleth; Techniques of mapping point phenomena-dot and a proportional circles; Geographical volume: Isopleth; Thematic mapping technique: properties, Uses and limitation of areal data: Choropleth, Dot, proportional circles, Point data- Isopleth, Proportional symbol maps; Chorochromatic and monochromatic maps

MODULE-4: Cartographic overlays-point, line and aeral data; Evolution of the basic symbolization of thematic cartography; Point symbols,: qualitative and quantitative; Line symbol: qualitative and quantitative; Area symbol: qualitative and quantitative

MODULE-5: Thematic maps- preparation and interpretation; Qualitative and quantitative thematic maps; Dot distribution maps; Isoline maps, Isopleth, Isometric lines; Choropleth maps; Catograms; Flow line maps; Maps employing proportional symbols, graphs and statistical summaries; Interpretation- survey of India Topo-sheet, geological maps, weather maps, soil maps, image and air photo, Interpretation to manual methods; Layout Design: Graticule elements, Orientation, scale, outline, index, lettering.

Reading List

1. Dent B (1993) Cartography: Thematic Map Design, WMC, Brown Publishers, McGraw Hill
2. Slocum Terry et all (2009) Thematic Cartography and Geoviosualisation, Pearson Prentice Hall
3. Monkhouse F. J. and Wilkinson H. R., 1973: Maps and Diagrams, Methuen, London.
4. Robinson A. H., 2009: Elements of Cartography, John Wiley and Sons, New York.
5. Singh R. L. and Singh R. P. B., 1999: Elements of Practical Geography, Kalyani Publishers.

PRACTICAL: Mark 25 / Credit- 2

- A. Use of Scale in Maps
 1. Construction and use of Graphical Scale, R.F., Statement Scale, Diagonal Scale
- B. Use of Cartograms in representation of Spatial Data
 1. Construction of One dimensional cartograms on Maps: Bars and Compound Bars
 2. Construction two dimensional cartograms on Maps: Circles, Proportional circles and pie diagram
 3. Construction of three dimensional cartograms: Spheres and Block diagrams
- C. Techniques of representation of Spatial Data
 1. Drawing of Isopleths using spot height/ rainfall / temperature / pressure
 2. Drawing of Choropleths using rainfall / population density / literacy
 3. Drawing of Isochrone using travel time data
- D. Techniques of representation by colors (chorochromatic Maps)
 1. Drawing a relief map using colors in a hierarchical order (Single)
 2. Drawing of a literacy Map using color in hierarchical order
- E. Enlargement & Reduction of Map
 1. Enlargement & reduction by Graphical method & calculation of New scale
 2. Enlargement & Reduction by instrumental method (Pentograph/Optical Pentograph/Optical Reflecting Projector)
- F. Record
- G. Viva Voce

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SEMESTER-III

CORE-5: ENVIRONMENTAL GEOGRAPHY

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1 : Environmental Geography – Concept and Scope:

- Meaning and concept of environment
- Component of environment
- Environmental change: long, medium and short term, extreme, hazards and disaster
- Environmental controls: concept of tolerance; controls- light, temperature, water, wind, edaphic and biotic factors.

MODULE-2 : Human-Environment Relationships

- Man place in ecosystem
- Man manipulation of ecosystem; Human effects on different ecosystem process
- Historical Progression, Adaptation
- Approach for a balance ecosystem; concept of Spaceship earth

MODULE-3 : Ecosystem – Concept, Structure and Functions:

- Concept of ecology and ecosystem
- Structure of ecosystem and their types: tropic level; food chain & web; concept of biomass
- Energy flow in ecosystem; forest and marine ecosystem

MODULE-4 : Environmental Problems

- Types of Environmental Problems
- Causes of Environmental Problems
- Environmental Problems in Tropical, Temperate and Polar Ecosystems

MODULE-5 : Environmental Programmes and Policies

- Global: United Nations Environment Programme, Global Environmental policy program, Sustainable development
- National Environmental policy of India,
- Local levels policy and program

PRACTICAL: Mark 25 / Credit- 2

1. Use of instrument for data collection: Rain gauge, Thermometer, wind vane, Hygro meter, barometer & Spectrophotometer.
2. Classification of climate by Koppen's methods and Thertharites's methods
3. Estimation of PE, TE and evapotranspiration
4. Calculation of water balance of an area
5. Use of Statistical methods in the study of cyclic pattern of extreme events: Rainfall, Maximum temperature & minimum temperature

Reading List

1. Chandna 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.
4. Singh, R.B. (Eds.) (2009) *Biogeography and Biodiversity*. Rawat Publication, Jaipur
5. Miller G. T., 2004: *Environmental Science: Working with the Earth*, Thomson BrooksCole, Singapore.
7. MoEF, 2006: *National Environmental Policy-2006*, Ministry of Environment and Forests, Government of India.
8. Singh, R.B. and Hietala, R. (Eds.) (2014) *Livelihood security in Northwestern Himalaya: Case studies from changing socio-economic environments in Himachal Pradesh, India*. *Advances in Geographical and Environmental Studies*, Springer
9. Odum, E. P. et al, 2005: *Fundamentals of Ecology*, Ceneage Learning India.
10. Singh S., 1997: *Environmental Geography*, Prayag Pustak Bhawan. Allahabad.
11. UNEP, 2007: *Global Environment Outlook: GEO4: Environment For Development*, United Nations Environment Programme.
12. Singh, M., Singh, R.B. and Hassan, M.I. (Eds.) (2014) *Climate change and biodiversity: Proceedings of IGU Rohtak Conference, Volume 1*. *Advances in Geographical and Environmental Studies*, Springer
13. Singh, R.B. (1998) *Ecological Techniques and Approaches to Vulnerable Environment*, New Delhi, Oxford & IBH Pub.



CORE-6: ECONOMIC GEOGRAPHY

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1

- Introduction: Concept and classification of economic activity
- Meaning and scope of economic geography
- Economic activities and their types: primary, secondary and tertiary
- Economics and stages of development; developed and developing.
- Global scenario of resource related problems and trend of management with reference to Iron Ore, Bauxite, Coal, Petroleum and Nuclear power

MODULE-2

- Location of economic activities
- Factors Affecting location of Economic Activity
- Von thunens theories of Agricultural location
- Weber and smith Industrial location theory
- Walter Christaller Central place theory

MODULE-3: Primary Activities:

- Factors infusing agriculture
- Subsistence and Commercial agriculture: Characteristics and distribution
- Fishing: and characteristics, distribution of major fishing ground of the world fishing and
- Forestry: Types and characteristics, factor affecting lumbering
- Mining: Types mining. World distribution of major minerals: Coal, mineral oil, natural gas, iron, manganese and bauxite.

MODULE-4: Secondary Activities:

- Factor effecting location of industry: Steel, aluminum, chemical and fertiliser
- Manufacturing (Cotton Textile, Iron and Steel),
- Concept of Manufacturing Regions, Special Economic Zones and Technology Parks.

MODULE-5: Tertiary Activities:

- Tertiary activities and service: concept, classification and importance
- Transport: concept of distance, accessibility and connectivity relative cost advantage of different modes of transport
- Trade as an engine and hindrance to growth, determinants, trade strategies import substitution and export promotion.
- International trade: Ricardian theory, international trade with reference to GATT and WTO.
(theories relating to agriculture and services have been dealt in other papers)

PRACTICAL: Mark 25 / Credit- 2

1. Showing occupational structure in circle and Pie diagram.
2. Preparation of map using data on distribution of key minerals in India and Odisha i.e Iron ore, Coal, petroleum, natural gas and alluminium.
3. Graphical representation of data on: Reserve/exploitation; Export/import; Energy potential/Use
4. Map of distribution of crops
5. Drawing of isotims and isodapance

Reading List

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-Blackwell.
3. Hodder B. W. and Lee Roger, 1974: *Economic Geography*, Taylor and Francis.
4. Combes P., Mayer T. and Thisse J. F., 2008: *Economic Geography: The Integration of Regions and Nations*, Princeton University Press.
5. Wheeler J. O., 1998: *Economic Geography*, Wiley.
6. Durand L., 1961: *Economic Geography*, Crowell.
7. Bagchi-Sen S. and Smith H. L., 2006: *Economic Geography: Past, Present and Future*, Taylor and Francis.
8. Willington D. E., 2008: *Economic Geography*, Husband Press.
9. Clark, Gordon L.; Feldman, M.P. and Gertler, M.S., eds. 2000: *The Oxford*

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CORE-7: FIELD WORK AND RESEARCH METHODOLOGY

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1 : Field Work in Geographical Studies

- Role, Value and Ethics of Field-Work
- Literature review
- Identifications of research problem, selection of research theme

MODULE-2 : Defining the Field and Identifying the Case Study – Rural / Urban / Physical / Human / Environmental.

MODULE-3 : 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)

MODULE-4 : Use of Field Tools

- Collection of Material for Physical and Socio-Economic Surveys.
- Use of statistical tool for data analysis
- Use of cartography of data representation

MODULE-5 : Designing the Field Report

- Aims and Objectives
- Methodology
- Analysis, Interpretation and Writing the Report.

PRACTICAL: Mark 25 / Credit- 2

1. Each student will prepare an individual report based on primary/ and secondary data collected during field work.
2. The students / teachers can opt to take students in or outside, depending upon, problem to be studied.
3. The duration of the field work should not exceed 10 days.
4. The word count of the report should be about 8000 to 12,000 excluding figures, tables, photographs, maps, references and appendices.
5. One copy of the report on A 4 size paper should be submitted in soft binding.

Reading List

1. Blij H. J. De, 1971: *Geography: Regions and Concepts*, John Wiley and Sons.
2. Claval P.I, 1998: *An Introduction to Regional Geography*, Blackwell Publishers, Oxford and Massachusetts.
3. Friedmann J. and Alonso W. (1975): *Regional Policy - Readings in Theory and Applications*, MIT Press, Massachusetts.
4. Gore C. G., 1984: *Regions in Question: Space, Development Theory and Regional Policy*, Methuen, London.
5. Gore C. G., Köhler G., Reich U-P. and Ziesemer T., 1996: *Questioning Development; Essays on the Theory, Policies and Practice of Development Intervention*, Metropolis- Verlag, Marburg.
6. Haynes J., 2008: *Development Studies*, Polity Short Introduction Series.
7. Johnson E. A. J., 1970: *The Organization of Space in Developing Countries*, MIT Press, Massachusetts.
8. Peet R., 1999: *Theories of Development*, The Guilford Press, New York.
9. UNDP 2001-04: *Human Development Report*, Oxford University Press.
10. World Bank 2001-05: *World Development Report*, Oxford University Press, New

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SEMESTER-IV

CORE-8: EVOLUTION GEOGRAPHICAL THOUGHT

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1 : Paradigms in Geography

MODULE-2 : Pre-Modern: Early Origins of Geographical Thinking with reference to the Classical and Medieval Philosophies.

MODULE-3 : Modern: Evolution of Geographical Thinking and Disciplinary Trends in Germany, France, Britain, United States of America.

MODULE-4 : Debates: Environmental Determinism and Possibilism; Systematic and Regional; Ideographic and Nomeothetic.

MODULE-5 : Trends:

- Quantitative Revolution and its Impact, Behaviouralism, Systems Approach, Radicalism, Feminism;
- Towards Post Modernism – Changing Concept of Space in Geography,
- Future of Geography.

PRACTICAL: Mark 25 / Credit- 2

1. Plane table:
2. Prismatic compass
3. Dumpy Leveling
4. Theodolite
5. GPS

Reading List

1. Arentsen M., Stam R. and Thuijjs R., 2000: *Post-modern Approaches to Space*, ebook.
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.
5. Hartshorne R., 1959: *Perspectives of Nature of Geography*, Rand MacNally and Co.
6. Holt-Jensen A., 2011: *Geography: History and Its Concepts: A Students Guide*, SAGE.
7. Johnston R. J., (Ed.): *Dictionary of Human Geography*, Routledge.
8. Johnston R. J., 1997: *Geography and Geographers, Anglo-American Human Geography since 1945*, Arnold, London.
9. Kapur A., 2001: *Indian Geography Voice of Concern*, Concept Publications.
10. Martin Geoffrey J., 2005: *All Possible Worlds: A History of Geographical Ideas*, Oxford.
11. Soja, Edward 1989. *Post-modern Geographies*, Verso, London. Reprinted 1997: Rawat Publ., Jaipur and New Delhi.



CORE-9 : STATISTICAL METHODS

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1 : Use of Data in Geography:

Characteristics of Geographical Data: It's Nature, Scope and methods of collection
Geographical Data Matrix, Significance of Statistical Methods in Geography;
Sources of Data; Scales of Measurement (Nominal, Ordinal, Interval, Ratio).

MODULE-2 : Tabulation and Descriptive Statistics: Frequencies (Deciles, Quartiles), Cross Tabulation; Central Tendency (Mean, Median and Mode, Centro-graphic Techniques, Dispersion (Standard Deviation, Variance and Coefficient of Variation).

MODULE-3 : Sampling: Meaning and purpose of sampling; Types of Sampling: Purposive, Random, Systematic and Stratified.

MODULE-4 : Theoretical Distribution: Probability and Normal Distribution.

MODULE-5 : Association and Correlation: Rank Correlation, Product Moment Correlation, and Simple Regression, Residuals from regression

PRACTICAL: Mark 25 / Credit- 2

1. Measure of central tendency: Mean, Median & mode (both group and ungroup data) and their representation on histogram and Ogives
2. Dispersion of data: Dispersion diagram, mean deviation, standard deviation, coefficient of variability.
3. Scatter diagram, Spearman's Rank correlation, computation of regression equation by least square methods
4. Sampling techniques: Random, Stratified and purposive

Reading List

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

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CORE-10: HUMAN GEOGRAPHY

CREDITS: 6, (Theory 4 + Practical 2)

(Total Marks: 100, Mid Sem -15, Practical- 25, Term End – 60: Duration: 3 hrs)

MODULE-1 : Introduction:

Meaning and Scope of human geography, Defining Human Geography; Major Themes; Contemporary Relevance

MODULE-2 :Space and Society: Cultural Regions; Race; Religion and Language, Cultural realms of the world.

MODULE-3 : Population geography

Factor affecting distribution of population, Population Growth and Distribution; Population Composition; Demographic Transition Theory

MODULE-4 : Settlements Geography:

Origin and growth of settlements; Types and patterns of Rural Settlements; Classification of Urban Settlements; urban morphology; Trends and Patterns of World Urbanization

MODULE-5 : Population-Resource Relationship; Concept of Optimum population, Population and environment, population and natural resources.

PRACTICAL: Mark 25 / Credit- 2

1. Population distribution (Rural and Urban) by dots, circle and Spheres
2. Population distribution (rural and urban) by choropleth techniques
3. Population pyramid showing Age-sex distribution of population
4. Graphical analysis of trends of growth of population, urbanization and literacy
5. Comparative analysis of population composition of two different areas by Pie diagram
6. Population growth rate and projection by arithmetic, geometric, harmonic and RGI methods.

Reading List

1. Chandna, R.C. (2010) *Population Geography*, Kalyani Publisher.
2. Hassan, M.I. (2005) *Population Geography*, Rawat Publications, Jaipur
3. Daniel, P.A. and Hopkins, M.F. (1989) *The Geography of Settlement*, Oliver & Boyd, London.
4. Johnston R; Gregory D, Pratt G. et al. (2008) *The Dictionary of Human Geography*, Blackwell Publication.
5. Jordan-Bychkov et al. (2006) *The Human Mosaic: A Thematic Introduction to Cultural Geography*. W. H. Freeman and Company, New York.

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SEMESTER - V

CORE-11: GEOGRAPHY OF INDIA

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Physical: Physiographic Divisions, soil and vegetation, climate (characteristics and classification)

MODULE-2: Population: Distribution (Rural and Urban) and growth, Structure

MODULE-3: Economic: Mineral and power resources distribution and utilisation of iron buxsite ore, coal, petroleum, gas; agricultural production and distribution of rice and wheat, industrial development : automobile and Information technology

MODULE-4: Social: Distribution of population by race, caste, religion, language, tribes and their correlates

MODULE-5: Regionalisation of India: Physiographic (R. L. Singh), Socio – cultural (Sopher), Economic

PRACTICAL: Mark 25 / Credit- 2

Students have to visit an area and prepare a report of Geo-Economic survey, which will be evaluated by the internal and external at the end of the semester.

Reading List

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 Intenational Perspective. Vol. 3 – Indian Perspective*.
4. Sdyasuk Galina and P Sengupta (1967): *Economic Regionalisation of India*, Census of India
5. Sharma, T. C. 2003: *India - Economic and Commercial Geography*. Vikas Publ., New Delhi.
6. Singh R. L., 1971: *India: A Regional Geography*, National Geographical Society of India.
7. Singh, Jagdish 2003: *India - A Comprehensive & Systematic Geography*, GyanodayaPrakashan, Gorakhpur.
8. Spate O. H. K. and Learmonth A. T. A., 1967: *India and Pakistan: A General and Regional Geography*, Methuen.
9. Tirtha, Ranjit 2002: *Geography of India*, RawatPubs., Jaipur & New Delhi.
10. Pathak, C. R. 2003: *Spatial Structure and Processes of Development in India*. Regional Science Assoc., Kolkata.
11. Tiwari, R.C. (2007) *Geography of India*. PrayagPustakBhawan, Allahabad
12. Sharma, T.C. (2013) *Economic Geography of India*. Rawat Publication, Jaipur

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CORE-12: REMOTE SENSING AND GIS

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Remote Sensing: Definition and Development; Platforms and Types; Photogrammetry.

MODULE-2: Satellite Remote Sensing: Principles, EMR Interaction with Atmosphere and Earth; Surface; Satellites (Landsat and IRS); Sensors

MODULE-3: Image Processing: Pre-processing (Radiometric and Geometric Correction); Enhancement (Filtering); Classification (Supervised and Un-supervised)

MODULE-4: Satellite Image Interpretation.

MODULE-5: Application of Remote Sensing: Land Useand, Land Cover and Urban study.

PRACTICAL: Mark 25 / Credit- 2

1. Preparation of 3D vision using stereo card and stereoscope
2. Determination of scale of aerial photograph
3. Identification of details and mapping from aerial photograph
4. Determination of height of object from aerial photograph using parallel bar
5. Digitization and georeferincing of a map using GIS software
6. Showing of attribute using bar, wheel and shading in GIS

7. Layout design and printing of the map in different scale

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.
4. Lillesand T. M., Kiefer R. W. and Chipman J. W., 2004: *Remote Sensing and Image Interpretation*, Wiley. (Wiley Student Edition).
5. Nag P. and Kudra, M., 1998: *Digital Remote Sensing*, Concept, New Delhi.
6. Rees W. G., 2001: *Physical Principles of Remote Sensing*, Cambridge University Press.
7. Singh R. B. and Murai S., 1998: *Space-informatics for Sustainable Development*, Oxford and IBH Pub.
8. Wolf P. R. and Dewitt B. A., 2000: *Elements of Photogrammetry: With Applications in GIS*, McGraw-Hill.
9. Sarkar, A. (2015) *Practical geography: A systematic approach*. Orient Black Swan Private Ltd., New Delhi
10. Chauniyal, D.D. (2010) *Sudur Samvedanevam Bhogolik Suchana Pranali*, Sharda PustakBhawan, Allahabad

SEMESTER - VI

CORE-13: REGIONAL PLANNING AND DEVELOPMENT

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Definition of Region, Evolution and Types of Regional planning: Formal, Functional, and Planning; Regions and Regional Planning; Need for Regional Planning; Types of regional Planning.

MODULE-2: Choice of a Region for Planning: Characteristics of an Ideal Planning Region; Delineation of Planning; Region; Regionalization of India for Planning (Agro Ecological Zones)

MODULE-3: Theories and Models for Regional Planning: Growth Pole Model of Perroux; Growth Centre Model in; Indian Context; Myrdal, Hirschman, Rostow and Friedmann; Village Cluster

MODULE-4: Changing Concept of Development, Concept of underdevelopment; Efficiency-Equity Debate

MODULE-5: Measuring development: Indicators (Economic, Social and Environmental); Human development.

PRACTICAL: Mark 25 / Credit- 2

1. Final selection of development indicator
2. Elimination of scale biasness
3. Methods of composite index (rank aggregation and index method)
4. Measuring and mapping of regional disparity of state/district
5. Delineation of planning region

Reading List

1. Blij H. J. De, 1971: *Geography: Regions and Concepts*, John Wiley and Sons.
2. Claval P., 1998: *An Introduction to Regional Geography*, Blackwell Publishers, Oxford and Massachusetts.
3. Friedmann J. and Alonso W. (1975): *Regional Policy - Readings in Theory and Applications*, MIT Press, Massachusetts.
4. Gore C. G., 1984: *Regions in Question: Space, Development Theory and Regional Policy*, Methuen, London.
5. Gore C. G., Köhler G., Reich U-P. and Ziesemer T., 1996: *Questioning Development; Essays on the Theory, Policies and Practice of Development Intervention*, Metropolis- Verlag, Marburg.
6. Haynes J., 2008: *Development Studies*, Polity Short Introduction Series.
7. Johnson E. A. J., 1970: *The Organization of Space in Developing Countries*, MIT Press, Massachusetts.
8. Peet R., 1999: *Theories of Development*, The Guilford Press, New York.
9. UNDP 2001-04: *Human Development Report*, Oxford University Press.
10. World Bank 2001-05: *World Development Report*, Oxford University Press, New

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CORE-14: DISASTER MANAGEMENT

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE 1: Disasters: Definition and Concepts: Hazards, Disasters; Risk and Vulnerability; Classification

MODULE-2: Disasters in India: (a) Flood: Causes, Impact, Distribution and Mapping; Landslide: Causes, Impact, Distribution and Mapping; Drought: Causes, Impact, Distribution and Mapping

MODULE-3: Disasters in India: (b) Earthquake and Tsunami: Causes, Impact, Distribution and Mapping; Cyclone: Causes, Impact, Distribution and Mapping.

MODULE-4: Manmade disasters: Causes, Impact, Distribution and Mapping

MODULE-5: Response and Mitigation to Disasters: Mitigation and Preparedness, NDMA and NIDM; Indigenous Knowledge and Community-Based Disaster Management; Do's and Don'ts During and Post Disasters, Disaster Resilience.

PRACTICAL: Mark 25 / Credit- 2

1. HVCA risk assessment (15 marks)
2. Preparation of a Disaster management plan of a locality (10 marks)

Reading List

1. Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
2. Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
3. Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
4. Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi. Chapter 1, 2 and 3
5. Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
6. Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
7. Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications, Dordrecht.
8. Singh Jagbir (2007) "Disaster Management Future Challenges and Opportunities", 2007. Publisher-I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India

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DISCIPLINE SPECIFIC ELECTIVE (DSE)

SEMESTER-V

GEOGRAPHY

DSE-1: POPULATION GEOGRAPHY

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Defining the Field – Nature and Scope; Sources of Data with special reference to India (Census, Vital Statistics and NSS).

MODULE-2: Population Size, Distribution and Growth, Density of population – Determinants and Patterns; Theories of Growth – Malthusian Theory and Demographic Transition Theory.

MODULE-3: Population Dynamics: Fertility, Mortality and Migration – Measures, Determinants and Implications.

MODULE-4: Population Composition and Characteristics – Age-Sex Composition; Rural and Urban Composition; Literacy.

MODULE-5: Contemporary Issues – Ageing of Population; Declining Sex Ratio; HIV/AIDS.

PRACTICAL: Mark 25 / Credit- 2

1. Calculation of vital rate and ration and mapping
 - a. CBR, CDR and Annual growth rate
 - b. IMR, NNMR and MMR, U5MR
 - c. TFR, GFR, Age specific fertility rate
2. Population estimation
3. Estimation of population at different age group
4. Calculation of life at birth
5. Time series analysis of demographic parameters
6. Comparative analysis of population composition using population pyramid diagram

Reading List

1. Barrett H. R., 1995: *Population Geography*, Oliver and Boyd.
2. Bhende A. and Kanitkar T., 2000: *Principles of Population Studies*, Himalaya Publishing House.
3. Chandna R. C. and Sidhu M. S., 1980: *An Introduction to Population Geography*, Kalyani Publishers.
4. Clarke J. I., 1965: *Population Geography*, Pergamon Press, Oxford.
5. Jones, H. R., 2000: *Population Geography*, 3rd ed, Paul Chapman, London.
6. Lutz W., Warren C. S. and Scherbov S., 2004: *The End of the World Population Growth in the 21st Century*, Earthscan
7. Newbold K. B., 2009: *Population Geography: Tools and Issues*, Rowman and Littlefield Publishers.
8. Pacione M., 1986: *Population Geography: Progress and Prospect*, Taylor and Francis.
9. Wilson M. G. A., 1968: *Population Geography*, Nelson.
10. Panda B P (1988): *JanasankyaBhugol*, M P Hindi GranthAcademy,Bhopal
11. Maurya S D (2009) *JansankyaBhugol*, Sharda PutakBhawan, Allahabad
12. Chandna, R C (2006), *JansankhyaBhugol*, Kalyani Publishers, Delhi

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DSE-2: AGRICULTURAL GEOGRAPHY

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Defining the Field: Introduction, nature and scope; Land use/ land cover definition and classification.

MODULE-2: Determinants of Agriculture: Physical, Technological and Institutional

MODULE-3: Agricultural Regions of India: Agro-climatic, Agro-ecological & Crop Combination Regions.

MODULE-4: Agricultural Systems of the World (Whittlesey's classification) and Agricultural Land use model (Von Thuenen, modification and relevance).

MODULE-5: Agricultural Revolutions in India: Green, White, Blue, Pink

PRACTICAL: Mark 25 / Credit- 2

1. Agricultural regionalisation
 - a. Rating of agricultural development
 - b. Calculation of Degree of commercialization
2. Cropping pattern analysis
3. Indexing of Crop diversification of a region
4. Preparation of agricultural efficiency Index and mapping
5. estimation of productivity of and area
6. calculation of soil potentiality and productivity rating

Reading List

1. Basu, D.N., and Guha, G.S., 1996: *Agro-Climatic Regional Planning in India*, Vol.I& II, Concept Publication, New Delhi.
2. Bryant, C.R., Johnston, T.R, 1992: *Agriculture in the City Countryside*, Belhaven Press, London.
3. Burger, A., 1994: *Agriculture of the World*, Aldershot, Avebury.
4. Grigg, D.B., 1984: *Introduction to Agricultural Geography*, Hutchinson, London.
5. Ilbery B. W., 1985: *Agricultural Geography: A Social and Economic Analysis*, Oxford University Press.
6. Mohammad, N., 1992: *New Dimension in Agriculture Geography*, Vol. I to VIII, Concept Pub., New Delhi.
7. Roling, N.G., and Wageruters, M.A.E.,(ed.) 1998: *Facilitating Sustainable Agriculture*, Cambridge University Press, Cambridge.
8. Shafi, M., 2006: *Agricultural Geography*, Doring Kindersley India Pvt. Ltd., New Delhi
9. Singh, J., and Dhillon, S.S., 1984: *Agricultural Geography*, Tata McGraw Hill, New Delhi.
10. Tarrant J. R., 1973: *Agricultural Geography*, David and Charles, Devon.

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SEMESTER-VI

DSE-3: URBAN GEOGRAPHY

(CREDITS: 6, Theory=4 + Practical=2)

(Total Marks: 100, Mid Sem=15, Practical=25, Term End=60: Duration: 3 hrs.)

MODULE-1: Urban geography: Introduction, nature and scope

MODULE-2: Patterns of Urbanisation in developed and developing countries

MODULE-3: Functional classification of cities: Quantitative and Qualitative Methods

MODULE-4: Urban Issues: problems of housing, slums, civic amenities (water and transport)

MODULE-5: Case studies of Delhi, Mumbai, Kolkata, Chennai, Bhubaneswar and Bhawaniapatna with reference to Land use and Urban Issues

PRACTICAL: Mark 25 / Credit- 2

1. Calculation of cities
 - a. Functional classification
 - b. Size classification
2. Trends of Urbanisation
 - a. Growth of urbanisation
 - b. Growth of urban center
3. Population estimation of urban center of the future
4. Development of questionnaire for study of socio-economic condition for a slums
5. Development of framework for FGD and PRA for the slum
6. Study of factor associated with urbanisation.

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*, Routledge.
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.
5. Knox P. L. and McCarthy L., 2005: *Urbanization: An Introduction to Urban Geography*, Pearson Prentice Hall New York.
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☆☆☆☆☆

DSE-4: PROJECT REPORT (Credits: 6) - MARKS – 100

Student have a select a topic related to the Geography and submitted a synopsis for the same before the HoD and to present the synopsis at the workshop for approval. Based on the approved synopsis students will prepare a project report which will be evaluated both by inter and external at the end of the semester.

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