



**Center for Basic Sciences
Pt. Ravishankar Shukla University
Raipur 492010 Chhattisgarh**

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SYLLABUS

HINDI LANGUAGE

SEMESTER EXAMINATION

CENTER FOR BASIC SCIENCE

2015

PT. RAVISHANKAR SHUKLA UNIVERSITY

RAIPUR -492010, CHHATTISGARH

HINDI LANGUAGE COURCES

JULY-DECEMBER 2015

Semester-I

SUB.	COURSE	DURATION	INTERNAL ASSESSMENT	THEORY MARKS	TOTEL MARKS
HINDI LANGUAGE	HINDI LANGUAGE	3 HRS	20	80	100

अंक विभाजन

दीर्घ उत्तरीय	10×5	50
लघु उत्तरीय	5×4	20
अतिलघुउत्तरीय	1×10	10
कुल		80

मूल विज्ञान केन्द्र ,पं. रविशंकर शुक्ल विश्वविद्यालय ,रायपुर (छ.ग.)

आधार पाठ्यक्रम (FOUNDATION COURSE)

रचनात्मक हिंदी भाषा

प्रस्तावना

भाषा से व्यक्तित्व बनता है । भाषा –कौशल प्रभावी व्यक्तित्व निर्माण में सहायक होता है । इस पाठ्यक्रम का उद्देश्य उच्चशिक्षारत विज्ञान के विद्यार्थियों में हिंदी भाषा की गुणवत्ता को बनाये रखना है । साथ ही माध्यमिक शिक्षा तक अर्जित भाषा कौशल को उच्चतर बनाना एवं विज्ञान के विद्यार्थियों को साहित्य ,कला, संस्कृति से जोड़े रखना है । पाठ्यक्रम में व्याकरण के मूलभूत अध्यायों के साथ साहित्य ,संस्कृति संबंधी रचनाएँ शामिल की गई हैं । इससे आज की युवा पीढ़ी को प्रेरणा मिलेगी ।

मूल विज्ञान केन्द्र ,पं. रविशंकर शुक्ल विश्वविद्यालय ,रायपुर (छ.ग.)

रचनात्मक हिंदी भाषा

- इकाई I— (1) मानक हिंदी भाषा , वर्तनी लेखन में अशुद्धियों , शब्द शुद्धि, वाक्य शुद्धि ,
हिंदी भाषा के विकास में हिंदीतर एवं विदेशी विद्वानों का योगदान ,
(2) उसने कहा था , कहानी— चंद्रधर शर्मा गुलेरी ।
- इकाई II— (1) पत्राचार औपचारिक व अनौपचारिक पत्र एवं संप्रेषण कौशल ।
(2) मनुष्य ही साहित्य का लक्ष्य है । (हजारी प्रसाद द्विवेदी)
- इकाई III— (1) पारिभाषिक शब्दावली की परिभाषा एवं स्वरूप तथा निर्माण की प्रक्रिया (विज्ञान –तकनीकी),
शब्द भंडार ।
(2) सादगी, सत्य और अहिंसा –मोहनदास करमचंद गांधी (आत्मकथांश)
- इकाई IV— (1) देवनागरी लिपि, वाग्यंत्र और ध्वनि उत्पादन में उनकी भूमिका , स्वर व्यंजन का वर्गीकरण ,IPA
अंतरराष्ट्रीय ध्वनि लिपि ।
(2) नमामि छत्तीसगढ़. (छत्तीसगढ़. का सांस्कृतिक वैभव) : डॉ हीरालाल शुक्ल (आलेख) ।
- इकाई V— (1) अनुवाद , परिभाषा ,प्रक्रिया , अनुवादक के गुण , सफल अनुवाद, हिंदी से अंग्रेजी अनुवाद ।
(2) योग की शक्ति –डॉ. हरिवंश राय बच्चन (डायरी) ।
(3) पृथक छत्तीसगढ़. राज्य –विष्णु खरे (कविता) ।

H 101: Communication Skills(COMMON TO ALL BRANCHES)

Unit-I

An interactive session (with examples) on what is communication, communication in the natural and civilized worlds, types of human communication: visual / non-verbal / verbal, written / spoken, etc

Unit-II

An overview of mass media; a brief discussion of their types (with examples). The concepts of facilitating factors, barriers, and filters in communication; the seven C's of effective communication.

Unit-III

Verbal communication: How to speak / listen effectively (in interpersonal communication), types of public speaking, tips for effective public speaking, how to make effective presentations. The role of written text in communication,

Unit-IV

Types of writing (academic/creative/general; formal/informal etc.) with examples of good/bad writing and their analysis. Introduction to letter writing, with stress on formal correspondence; email do's and don'ts.

Unit-V

Academic writing- an overview; explanation of various terms used in academic writing; parts of a paper/thesis; aspects such as formal language, grammatical accuracy, etc. Common grammatical/punctuation errors and how to avoid them (example-based instruction)

Books Recommended:

S.No	Author	Book	Publication
1.	Rajendra Pal and JS Kurlahalli,	Essentials of Business Communication	S.Chand& Sons,
2	Michael Alley,	The Craft of Scientific Writing (3rd Edition),	Springer, ,New York, 1996.
3	Philip Reubens (General editor),	Science and Technical Writing – A Manual of Style (2nd Edition),	Routledge, New York,2001.
4	Edmond H. Weiss	Writing Remedies – Practical Exercises for Technical Writing	Universities Press (India) Ltd. , Hyderabad,2000.
5	M. Ashraf Rizvi,	Effective Technical Communication	Tata Mc Graw – Hill , New Delhi ,2005.
6	DH Menzel, HM Jones& LGBoyd	Writing Technical Papers	Mc Graw Hill ,1961
7	KL Turbian	A Manual for Writers of Term Papers, Thesis and Dissertation	University of Chicago press ,1973.

201Subject: Communication Skills (Lab)

Course Outcome: After learning the course the students should be able to

1. To know the process of communication and its components.
2. To improve the language skills i.e. Listening Skills, Speaking Skills, Reading Skills and Writing Skills (LSRW).
3. Construct basic and intermediate skills in English / Hindi language.
4. To enhance phonetic competence, comprehension skills, presentation skills, group discussion skills etc.
5. To build confidence for communicating in English /Hindi and create interest for the life-long learning of English/Hindi language.

Unit 1

Elementary Phonetics (Speech Mechanism. The Description of Speech Sounds, The Phoneme the syllable; Intonation and Word Accent)

Formal (Extempore and Mock Interviews) and Informal Speaking(Situational Dialogues and Role play), Telephoning (Telephonic Conversations)

Unit 2

Paralinguistic features of speaking (voice modulation, pitch, tone, etc.)

Paper Presentation (Non-Technical & current Affairs), Use of Audio-Visual aids: Preparation slides, power point presentation etc.

Unit 3

Body Language(Gestures / Postures during Role Play/Speaking and JAM (Just-a-Minute) Session and Group Discussion

Unit 4

Listening and Comprehending spoken material in Standard Indian English, British English and American English; Exercises on Listening Comprehension, Exercises on Reading Comprehension

Effective Writing (Business Letters, Covering Letter, Resume on Word Document. Translation and Precis Writing)

Unit 5

Grammar:(English/ Hindi)

Grammar in use: Errors of Accidence and syntax with reference to Parts of Speech; Agreement of Subject and Verb; Tense and Concord; Use of connectives, Question tags. Voice and Narration.

Indianism in English: Punctuation and Vocabulary, Building (Antonym, Synonym, Verbal Analogy and One Word Substitution).

Books Recommended:

S.No	Author	Book	Publication
1.	W. Stannard Allen,	Living English Structure	Orient Longman Pvt. Ltd. (New Delhi) 2002
2	Bansal, R.K. and J.B. Harrison,	Spoken English: A Manual of Speech and Phonetics	Orient Longman Pvt. Ltd.(Mumbai) 2005.
3	Brown, Gillian	Listening to Spoken English	Longman..(Hong Kong)1983
4	Gimson, A.C.	An Introduction to the Pronunciation of English	Edward Arnold (London) 1980.
5	Kachru, Braj B	The Indianization of English: The English Language in India	Oxford University Press(Delhi) 1983
6	Suresh Kumar,	A Handbook for English Language Laboratories	E. & Sreehari, P. Foundation. (New Delhi) 2009
7	Sasi Kumar , V & Dhamija, P.V,	How to Prepare for Group Discussion and Interviews.	Tata McGraw Hill
8.		Spoken English (CIEFL) in 3 volumes with 6 cassettes	OUP
9.	Murphy Raymond	Essential English Grammar	Cambridge University Press. (1992).

301: World Literature(COMMON TO ALL BRANCHES)

Unit-I

What is Literature? - a discussion; Introduction to literary terms, genres, and forms of various periods, countries, languages, etc.

Unit-II

The Novel: Class study of 'Brave New World' by Aldous Huxley; Group discussions and student presentations on other genres such as the graphic novel, detective fiction, children's literature, etc.

Unit-III

Plays: Introduction to the history of theatre, class study of (mainly) two plays: 'Pygmalion' by G. B. Shaw and 'Fire and Rain' by Girish Karnad, the setting up of play –reading group through which the students can be introduced to several other plays.

Unit-IV

Poetry: Brief introduction; Study of poetic genres, forms, topics, figures of speech, poetic language etc. by analysing various poems from around the world

Unit-V

Short stories, essays and other types of writing by various authors. Screening of films based on literary works, such as Pygmalion (My Fair Lady), Fire and Rain (Agnivarsha), Persepolis (a graphic novel) and a few others.

Books Recommended:

S.No	Author	Book	
1	IforIvans	A Short History of English Literature	London: Penguin Books, 1976
2	Kettle Arnold	An Introduction to English Novel Vol. I, Vol. II	New. Delhi: Universal Book store, 1993.
3	Eagleton, Terry.	The English Novel: An Introduction	Oxford: Basil Blackwell. 1983
4	M.H. Abrams	A Glossary of Literary Terms	Wadsworth Publishing; 10th edition (January 10, 2011)
5	J.A. Cuddon	Dictionary of Literary Terms and Literary	(London: Penguin, 2004)
6	Girish Karnad	The Fire and the Rain	New Delhi, Oxford University Press, 1998
7	Aldous Huxley	'Brave New World'	New York: Harper Perennial, 1989
8	G. B. Shaw	Pygmalion	Longman Literature. Harlow: Longman, 1991

H302: History and Philosophy of Science (BIOLOGY GROUP)

Unit-I

Brief overview of the contemporary cultural development elsewhere in the world; Indus Civilisation: progress of art, architecture, science and technology, role of geometry in art and architecture; Study of ancient Indian linguistic techniques and their relation with modern programming languages; Overview of Paninian style and techniques; Precision of Sanskrit in expressing technical terms; History of number naming and writing in India; Sulbasutra and VedangaJyotisha – geometrical constructions and astronomical calculations; Jain literature on mathematics and astronomy; Linguistic techniques used in Aryabhata; Works of Brahmagupta in opposition of Aryabhata; Contribution of Kerala school of mathematics to development of mathematical ideas.

Unit-II

Genesis of systematic ideas: Science in ancient Greece; against mythological explanations to natural phenomena; Early atomism, mathematical atomism, against atomism. Introduction to epistemology; Possible criteria of demarcation between science and folklore; Non-science and metaphysics; Introduction to logical positivism and the “standard view”; Criticism of “standard view”.

Unit-III

Method of analysis and synthesis; Beginning of mathematical sciences; multicultural origins of science. Renaissance and scientific revolution:

Unit-IV

Galilean ideas; mechanisation of world picture; From alchemy to chemistry, from natural history to evolutionary history, from natural numbers to complex numbers, from physiology to cell biology.

Unit-V

Rise of experimental science: Discussion of some of the crucial experiments with an emphasis on the analysis of conceptual changes rather than the technical details.

Books Recommended:

S.No.	Author	Book	Publication
1	Colin Ronan	Cambridge Illustrated History of Science	Cambridge: Cambridge University Press. (1983).
2	Rom Harre	Great Scientific Experiments: 20 Experiments that Changed our View of the World	Oxford University Press, Oxford, 1983.
3	T. A. SaraswatiAmm	Geometry in Ancient and Medieval India	MLBD Publ., Delhi, 2007
4	Kim Plofker	Mathematics in India	Princeton Univ. Press
5	Samir Okasha	Philosophy of Science – A Very Short Introduction	Oxford Univ. Press, 2002

6	Henry Collins and Trevor Pinch	The Golem – What Everyone should Know about Science by	Cambridge Uni. Press, 1996
7	Alan Chalmers	What is this thing called Science?	University of Queensland Press, Open University press, 4th edition, 2013

H302: History and Philosophy of Science (PCM GROUP)

Unit-I

History of World Science up to the Scientific Revolution: Introduction about stone age, beginning of agriculture, urban civilization and science. Science in Sumeria, Babylonia and Egypt. Natural philosophy of pre-Socratic Greece. Natural philosophy in Athens. Greek science in the Alexandrian period. Rome and decline of Ancient European science. Science and technology in China. Science and technology in the Muslim world. Technology and the craft tradition in medieval Europe. The scholarly tradition during the middle ages

Unit-II

Renaissance, the Copernican system of the world. Gilbert, Bacon and the experimental method. Galileo and the science of mechanics. Descartes – the mathematical method and the mechanical philosophy. The Protestant reformation and the scientific revolution. Newton –the theory of universal gravitation and optics. Alchemy and iatrochemistry. Medicine, theory of circulation of blood. Growth and characteristics of the scientific revolution.

Unit-III

History of Ancient Indian Science: Indian civilization from pre-historic times to the Indus Valley Civilization. Ancient Indian mathematics and astronomy. Ancient Indian medicine and biology. Chemistry, metallurgy and technology in general in ancient India. Strengths, weaknesses and potentialities of ancient Indian science.

Unit-IV

Introduction to Philosophy of Science: What is science? Scientific reasoning; Explanation in science; Realism and instrumentalism; Scientific change and scientific revolutions.

Unit-V

Great Scientific Experiments: Group wise study and presentations by students of historically significant experiments in science.

Books Recommended:

S.NO	AUTHORS	BOOKS	PUBLICATION
1	Stephen F. Mason, Collier Books	A History of the Sciences, Macmillan Pub. Co. (1962)	Collier Books, Macmillan Pub. Co. (1962)
2	D. M. Bose, S. N. Sen, B. V. Subbarayappa	A Concise History of Science in India,	INSA (1971)
3	Samir Okasha,	Philosophy of Science – A Very Short Introduction,	Oxford University Press (2002)
4	Ron Harre	Great Scientific Experiments –,	Oxford University Press (1983)
5	Lloyd Motz and Jefferson Hane Weaver,	The Story of Physics,	Avon Books (1992)
6	Colin A. Ronan,	The Cambridge Illustrated History of World Science,	Cambridge-Newnes (1982)

7	Ed. Helaine Selin and Roddam Narasimha	Encyclopaedia of Classical Indian Sciences, ,	University Press (2007)
8		Articles from Wikipedia on History and philosophy of science	

H 601 Ethics of Science and IPR (BIOLOGY GROUP)

Unit-I

Introduction – causes of unethical acts, ignorance of laws, codes, policies and Procedures, recognition, friendship, personal gains; Bioethics: Definition – moral, values, ethics; Role and importance of ethics in biology; Professional ethics – professional conduct Ethical decision making, ethical dilemmas; Teaching ethical values to scientists, good laboratory practices, good manufacturing practices, laboratory Basic Approaches to Ethics; Posthumanism and Anti-Posthumanism; Bioethics: legal and regulatory issues;

Unit-II

Bioethics in healthcare, agriculture, modern biology, biotechnology, animal welfare & right / animals in research, wildlife conservation and management, commercialism in scientific research Bioethics and cross-cultural bioethics – Autonomy, Rights, Beneficence, Do No Harm, Justice, Confidentiality, Animal Rights, Environmental ethics, Decision-Making Perceptions of Ethical Biotechnology ‘Moral’ is not the same as Ethical, Mixed Perception of Benefit & Risk, Reasoning behind Acceptance or Rejection of Genetic Manipulation, Concerns about Consuming products of GMOs. Past and Present ‘Bioethical Conflicts’ in Biotechnology- Interference with Nature , Fear of Unknown, Regulatory Concerns, Human Misuse Future ‘Bioethical Conflicts’ in Biotechnology - Changing perception of Nature, Human Genetic Engineering

Unit-III

Ethical issues related to Synthetic biology: Engineering DNA-based biological circuits, including but not limited to standardized biological parts; Defining a minimal genome/minimal life (top-down); Constructing protocells, i.e. living cells, from scratch (bottom-up), Creating orthogonal biological systems based on a biochemistry, e.g. non-ATGC DNA bases or non-DNA non-RNA nucleic acids, so called XNA

Unit-IV

Introduction to IPR; Types of Intellectual property – Patents, Trademarks Copyrights and related rights; Traditional vs. Novelty; Importance of intellectual property rights in the modern global economic environment, Importance of intellectual property rights in India; IPR and its relevance in biology and environmental sciences; Case studies and agreements - Evolution of GATT and WTO and IPR provisions under TRIPS; Madrid agreement; Hague agreement; WIPO treaties; Budapest treaty; Indian Patent Act (1970)

Unit-V

Patents: Definition, patentable and non patentable inventions; types of patent application – Ordinary, Conventional, PCT, Divisional, and Patent of addition; Concept of Prior Art; Precautions while patenting disclosure / nondisclosure; Time frame and cost; Patent databases, Searching International databases; Patent licensing and agreement; Patent infringement – meaning, scope, litigation, case studies. Patenting rules – European Scenario, US Scenario, Australia Scenario, Indian Scenario, Non Patentable IP and Patentable IP in

Indian Patent Act Rights of patents – Infringement of patent rights Remedies for infringement of patent rights; Patentability and emerging issues

Books Recommended:

S.No	Author	Books	Publication
1	Arthur M. Lesk	Introduction to Bio Informatics, OUP	3rd Edition. Oxford University Press, 2008
2	Cynthia Gibas and Per Jambeck,	Developing Bioinformatics Computer Skills	Publisher: O'Reilly. First Edition April 2001
3	Atwood, Pearson Education	Introduction to Bioinformatics	Pearson Education (Singapore) Pte. Ltd (2002).
4	Tisdall, SPD	Beginning Perl for Bio-informatics	Publisher: O'Reilly Media. 2001
5	Smith, D.W., 1994	Biocomputing: Informatics and Genome Project	San Diego, CA: Academic Press, 1994
6	Baxevanis, A.D., Quellette, B.F.F.,	Bioinformatics: A practical Guide to the Analysis of Genes and Proteins	2nd ed. John Wiley and Sons, 2001. Bishop, M. (Ed.). 1998

H601: Ethics of Science and IPR (PCM GROUP)

Unit-I

Introduction to a Collective, Participatory Teaching-learning Program: A Science of Our own. Science Stands the Test of Ethics ... Some indicators.

Unit-II

Levels of Moral Development - Does it mean anything? Medical Ethics: Different themes pertaining to medical ethics including ethical issues in public health.

Unit-III

History, Philosophy and Psychology of Ethics: History of Political Economy and Modern Ethics. Environmental Ethics.

Unit-IV

Intellectual Property Rights and Associated Issues: History of Patenting. Digitalizing Culture-I: Free Software and Free Culture. Digitalizing Culture-II: Concentration and appropriation of Power by the few as well as Possibility of Distributive Justice.

Unit-V

Journals and Publishers: Monopolistic practices by Academic Publishers. Quest for Determining what is Virtuous: Ethics in Practice. Collaborative Projects by the Class. Teaching the Teachers and other Virtuous Inquiries.

Books Recommended

S.No	Authors	Books	Publication
1	Shiv Sahai Singh	The Law of Intellectual Property Rights,.	Deep & Deep publication Pvt. Ltd. 2004.
2	W R Cornish	Intellectual Property: Patents, copyright, Trademarks and allied rights	, London : Sweet & Maxwell, 1996
3	Jayanti Bagachi	World Trade organization; an Indian Perspective(2000).	Eastern Law House Private Limited (2000).
4	UNCTAD-ICTSD	Resource book on TRIPs and Development,	Cambridge University Press, 2005
5	SurendraBhandari ,	World Trade organisation and Developing Countries, 1998	Deep and Deep Publications Pvt. Ltd., New Delhi (2002)
6	Bleir, F.K., Crespi, R.S. and Straus, J.	Niotechnology and Patent Protection- an international review,	OECD
7	Jayashreee Watal,	Intellectual Property right s in the WTO and Developing Countries ,	Oxford University Press, New Delhi, first

			published 2001
8	Phillippe Culet,	Intellectual Property Protection and SustainableDdevelopment,	Lexis Nexis Butterworth, 2004.