SHAHEED NANDKUMAR PATEL VISHWAVIDYALAYA, RAIGARH (C.G.)

(A State University Established under Chhattisgarh Vishwavidyalaya Adhiniyam, 1973)

Scheme and Syllabus

of

Bachelor of Arts

Year- First

W.E.F. Session:- 2023-24

Syllabus Approved by the Central Board of Studies

B.A. Part - I
English Literature
Paper-I
Literature in English-1550-1750

(i)   Unit - 1 of Annotation is compulSory, and passages to be set from Units (II to V) at least one from each
      unit, 3 to be attempted.   3x5=15
(ii) Multiple choice/objective type questions to be set Unit vii, l5 to be set 10 be attempted. 1x10=10
(iii) From Unit-il to VI- 8 questions to be set at least one from each unit - 5 to be attempted. 10x5=10
      Word Limit for each answer 300 to 400 words.

UNIT-I ANNOTATIONS
UNIT- II POETRY

(a) William Shakespeare	-	Sonnet No. 1 From Fairest Creatures,
		Sonnet No. 55 Not Marble nor the Glided Monuments
(b) John Milton	-	How Soon Hath Time the subtle of Youth....
(c) John Donne	-	Death Be not Proud, The Good Morrow

UNI-III POETRY

(a) John Dryden	-	Portrait of Shadwell.
(b) Alexander Pope	-	From An Essay on Criticism (True ease in writing ... And the world's victor stood subdu'd by sound!)

UNIT-IV PROSE

(a) Francis Bacon	-	Of Studies, Of Health, Of Friendship
(b) Joseph Addison –	-	Sir Roger at Home
(c) Richard Steele	-	Of the Club.

UNIT-V DRAMA

William Shakespeare	-	The Tempest

UNIT-VI FICTIOIN

Jonathan Swift	-	Gulliver's Travels

UNIT- 7 LITERARY TOPICS

(i) Poetic Forms	:-	Lyric, Sonnet, Ode, Elegy, Ballads, Epic, Objective and Subjective Poetry.
(ii) Dramatic Forms	:-	Mystery and Miracle Plays, Morality Plays, Tragedy, Comedy, Poetic Drama, Interlude, Melodrama, Farce, Masque.
(iii) Prose Forms	:-	Objective and Subjective Essays, Novels, Autobiography, Travel Writing.
(iv) Dramatic Devices	:-	Plot, S oliloquy, Aside, Characterization, Dramatic Irony

After completing the Course the students will able to demonstrate:

co 01- a comprehensive knowledge of the literary works in English produced by the British writers this knowledge will include the various literary forms fictional as well as non- fictional employed by the British writers and Historical and LiterarY topics as well.

co 02- a critical understanding of the poets tike shakespeare' Milton and John Donne,JohnDrydenandAlexanderPope,playwrightslikeshakespeare'non fictional writers like Bacon, Addison, and Steele and the novelists like Swift.

co 03- a capacity to compare and contrast the different fiterary qualities of the writers and critically rank them in evaluative terms.

co 04- a critical inclination to read literature as a socio-cultural document'

co 05- a research tendency to go for innovative studies like English Literature in the postcolonial light of the latest research insights.

co 06- a socio- political sense of responsibility to stand up against colonizing human tendencies.

co 07- a visibre riterary- criticar bent towards understanding rife through literature.
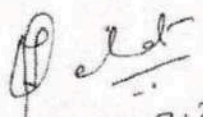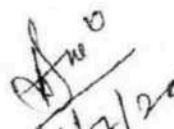
B.A. part I
English Literature
Paper -II (Literature in English : 1750-1900)
Course outcome

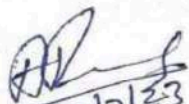**After completing the Course the students will able to demonstrate: -**

Co 01- a Comprehensive knowledge of the literary works in English produced by British writers this knowledge will include the various literary forms fictional as well as non- fictional employed by the British writers and Historical and Literary topics as well.

Co 02- a critical understanding of the poets like Blake, Wordsworth, Coleridge, Shelley, Keats, Tennyson and Browning and non fictional writers like Lamb and Hazlit and the novelists like Jane Austen and charles Dickens.

Co 03- a capacity to compare and contrast the different literary qualities of the writers with the criticaily rank them in evaluative terms.

Co 04- a critical inclination to read literature as a socio-cultural document.

Co 05- a research tendency to go for innovative studies like English Literature in the postcolonial light of the latest research insights.

Co 06- a socio- political sense of responsibility to stand up against colonizing human tendencies.

Co 07- avisible literary- critical bent towards understanding life through literature .
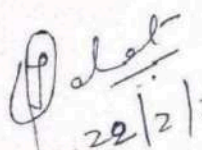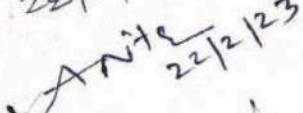
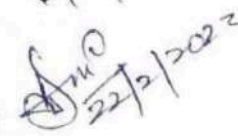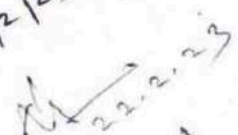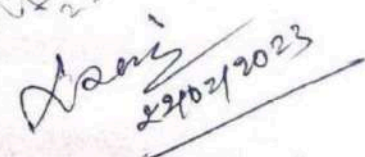| Program: B.A./B.Sc.	Class: I Year.	Session : 2023-24

Paper I: Physical Geography (UGeo-0101)		

Course Learning Outcome (CLO)	After the completion of course, the students will have ability to: 1. Understand the internal structure of the earth, rocks that compose it and forces within the earth that act to deform it. 2. Analyze how the natural and anthropogenic operating factors affect the development of land forms. 3. Understand about the denudation processes that unceasingly act at the earth's surface to shape land forms and reduce relief. 4. Assess the role of structure, stage and time in shaping the land forms. 5. Identify the Atmospheric pressure, winds humidity, concept of precipitation, its types and understand the Air Masses and Fronts and the Weather Forecasting. 6. Identify the relief of the ocean bottom, temperature, salinity of ocean water, tide, currents coral reef and oceanic resources.

Content of the Course	
Unit	**Topic**
1.	Origin of the Earth, Geological Time Scale, Earth's Interior, Continental Drift Theory (Wegner), Plate Tectonics, Isostasy.
2.	Earth movements: Earthquakes and Volcanoes, Rocks, Weathering, Erosion and Normal cycle of erosion, Evolution of landscapes: Fluvial, Aeolian (Arid and Semi Arid), Glacial, Karst.
3.	Elements of Weather and Climate, Composition and Structure of the Atmosphere. World patterns of Atmospheric Temperature, Pressure, and Winds.
4.	Atmospheric Humidity and Disturbances, Climatic Classification of Koppen, Geographical account of world climate patterns: Equatorial, Monsoon, Desert and Tundra.
5.	Bottom relief of Ocean, Distribution of Temperature and Salinity of Oceans and Seas, Currents and Tides, Ocean Deposition. Law of the Sea.

Learning Resources: Text Books, Reference Books, Other Resources

Suggested Readings:

1. Ahnned, E.: Coastal Geomorphology of India.
2. Chorley, R.. J.: Spatial Analysis in Geomorphology, Methuen, London, 1972.
3. Dayal, P. : A Text book of Geomorphology, R.K. Books, New Delhi.
4. Gautam, Alka : Geomorphology, Sharda Pustak Bhawan, Allahabad.
5. Holms, A.: Principles of Physical Geology, Thomas Nelson, London.
6. Jha, V.C. : Geomorphology, Vasundhara Publication, Gorakhpur.
7. Sparks, B.W. Geomorphology, Longman, London, 1960.
8. Sharma, H.S. (cd.): Perspective in Geomorphology, Concept, New Delhi, 1980.
9. Singh, S : Geomorphology, Prayag Publication, Allahabad, 1998.
10. Steers, J.A. : The Unstable Earth Methuen, London.
11. Thornbury, W.I.). Principles of Geomorphology, John Wiloy, New York, 1960.
12. Strahler, A.N.: Physical Geography, Willey, New York.
13. सिंह,एम.बी.(2001) : भौतिक भूगोल, तारा बुक ऐजेन्सी, वारणासी।
14. सिंह, सविन्द्र (2016) : भौतिक भूगोल, प्रयाग पुस्तक भवन, इलाहाबाद।
15. दयाल, परमेश्वर (2012) : भौतिक भूगोल, पंच शील प्रकाशन, जयपुर।
16. हुसैन, माजिद (2008) : भौतिक भूगोल, रावत पब्लिकेशन, जयपुर।

Suggested equivalent online course: 1. epgp.inflibnet.ac.in 2. virtual lectures available on youtube

Program: B.A./B.Sc.	Class: I Year.	Session : 2023-24
	Paper II: Human Geography (UGeo-0102)	

Course Learning Outcome (CLO)	After the completion of course, the students will have ability to: 1. Discuss and describe the major concepts and key principles of Human Geography including place, space, scale and landscape. 2. Appreciate the diversity of the cultural backgrounds and places. 3. Problem solving from a geographic perspective by understanding the role location plays.

Content of the Course

Unit	Topic
1.	Meaning, Definition, Nature and Scope of Human Geography, Man - environment relationship: Determinism, Possibilism, Determinism, Neo-Determinism and Probabilism; Human Development Index (HDI).
2.	Human Races: Formation and Evolution, Characteristics, Classification and Distribution. Human adaptation to environment: Eskimos, Bushman, Pigmy and Masai.
3.	Growth, Density and Distribution of World Population and factors influencing spatial distribution. Over, Under, and Optimum Population; Migration of Population.
4.	Rural Settlements: Characteristics, Types and Regional Pattern, Rural Houses in India, Urban Settlement- Types and Pattern.
5.	Environmental Issues: Global Warming, Climate Change, Acid rain, Deforestation, Desertification, Air, Water and Soil Pollution.

Learning Resources :Text Books, Reference Books, Other Resources

Suggested Readings:

1. Chisholm, M. (1985): Human Geography, 2nd edition, Penguin Books, London.
2. De Blij, H.J.(1996): Human Geography: Culture, Society and Space,. 2nd edition. John Wiley and Sons, New York,
3. Fellman, J. D., Arthur, G., Judith, G., Hopkins, J. and Dan, S. (2007): Human Geography: Landscapes of Human Activities. McGraw-Hill, New York. 10th edition.
4. Haggett, P. (2004): Geography: A Modern Synthesis. 8th edition, Harper and Row, New York.
5. Huggett, R. J. (1998): Fundamentals of Biogeography, Routledge, London.
6. Hussain, M. (1994): Human Geography, Rawat Publications, Jaipur.
7. Johnston, R. J., Gregory, D., Pratt, G. and Watts, M. (2009): The Dictionary of Human Geography. 5th edition, Basil Blackwell Publishers, Oxford.
8. Norton, W. (2008): Human Geography, Oxford University Press, New York. 5th ed.
9. Singh, K. N. and Singh, J. (2001): *Manav Bhugol*. Gyanodaya Prakashan, Gorakhpur. 2nd edition.
10. Singh, L.R. (2005): Fundamentals of Human Geography, Sharda Pustak Bhawan, Allahabad
11. Smith, D. M.(1977): Human Geography- A Welfare Approach, Edward Arnold (Publishers) Ltd., London

Suggested equivalent online course:
epgp.inflibnet.ac.in   2. virtual lectures available on YouTube

एक वर्षीय प्रमाणपत्र पाठ्यक्रम
(सत्र–2022–23)

बी.ए. भाग–1
(हिंदी साहित्य) प्रथम प्रश्नपत्र
प्राचीन हिंदी काव्य

पूर्णांक: 75
क्रेडिट – 5, 90 कालखण्ड

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उद्देश्य एवं प्रस्तावना : प्राचीन से यहां तात्पर्य है– आधुनिक काल से पूर्व का काल। सही अर्थ में हिंदी भाषा और साहित्य का विकास आदिकाल से शुरू होता है। इसमें धार्मिक तथा ऐतिहासिक दो प्रकार का साहित्य मिलता है, जो प्रबंध, मुक्तक, रासो, फागु, चरित, सुभाषित आदि विविध काव्यरूपों में अभिव्यंजित है। मध्यकालीन साहित्य की पृष्ठभूमि के रूप में इसे प्रतिष्ठापित किया जाता है। मध्यकालीन काव्य में भक्तिकाव्य, जहां लोक जागरण को स्वर देने वाला है वहीं रीति काल अपने लौकिक, श्रृंगारिक, परिदृश्य में तत्कालीन सामाजिक, सांस्कृतिक, राजनीतिक स्थितियों को बेलौस अभिव्यंजित करता है। अतः भाषा संस्कृति, विचार, मानवता, काव्यत्व, काव्यरूपता, लौकिकता–पारलौकिता आदि दृष्टियों से इसका अध्ययन अत्यावश्यक है।

पाठ्य विषय : प्राचीन हिन्दी काव्य की पृष्ठभूमि एवं प्रवृत्तियाँ
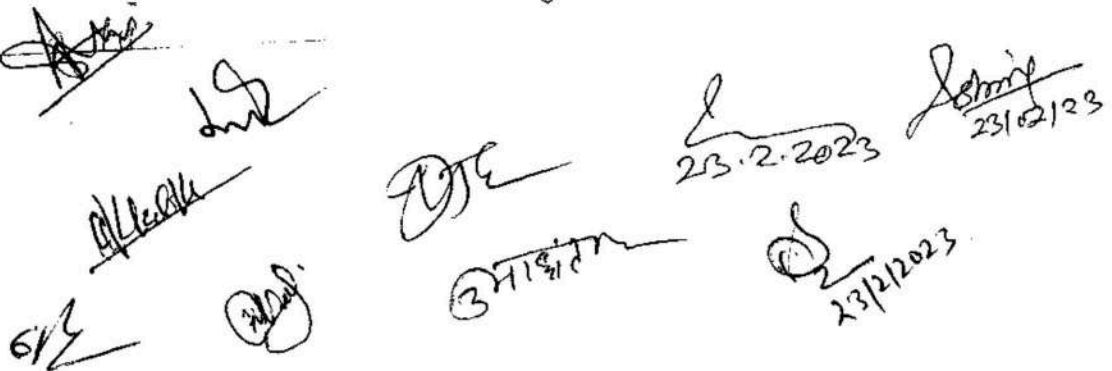
1. कबीरदास : (कबीर–कांतिकुमार जैन–प्रारंभिक 50 साखियाँ।)
2. जायसी : (संक्षिप्त पद्मावत– श्यामसुंदर दास, नागमती वियोग वर्णन)
3. सूरदास : (भ्रमरगीत सार–संपादक आचार्य रामचन्द्र शुक्ल– प्रारंभिक 25 पद)
4. तुलसीदास : "श्रीरामचरितमानस" के सुंदरकांड से प्रारंभिक 30 दोहे, चौपाई, छंद सहित।
5. घनानन्द : (घनानन्द– संपादक विश्वनाथ प्रसाद मिश्र– प्रारंभिक 25 छंद)

द्रुतपाठ : इसके अंतर्गत 1. विद्यापति 2.रहीम 3.रसखान 4.गोपाल मिश्र का अध्ययन किया जाएगा, जिनमें से किन्ही दो पर लघु उत्तरीय प्रश्न पूछे जाएंगे।

अंक विभाजन

3 व्याख्याए	अंक–21
2 आलोचनात्मक प्रश्न	अंक–24
3 लघु उत्तरीय प्रश्न	अंक–15
15 वस्तुनिष्ठ प्रश्न	अंक–15

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कुल–75 अंक

23.2.2023

23/02/23

23/2/2023

इकाई विभाजन :

इकाई एक – व्याख्या	18 कालखण्ड
इकाई दो– कबीर, जायसी	18 कालखण्ड
इकाई तीन – सूर, तुलसी, घनानंद	18 कालखण्ड
इकाई चार – द्रुत पाठ के कवि– विद्यापति, रहीम, रसखान, गोपाल मिश्र	18 कालखण्ड
इकाई पॉच – वस्तुनिष्ठ प्रश्न (सम्पूर्ण इकाई से)	18 कालखण्ड

पाठ्यक्रम अध्ययन की परिलब्धियाँ (CLO)

1. विद्यार्थियों को हिंदी साहित्य की प्रारंभिक काव्य परंपरा एवं रचना शिल्प से परिचित कराना।

2. प्राचीन हिंदी काव्य के अंतर्गत आदिकाल, भक्तिकाल एवं रीतिकाल के प्रतिनिधि कवियों के साहित्य के प्रति मूलभूत समझ विकसित करना।

3. साहित्य के माध्यम से विद्यार्थियों में प्रेम, सद्भाव एवं जीवन मूल्यों का विकास करना।

4. छत्तीसगढ़ प्रदेश के कवियों एवं उनके साहित्यिक अवदान के प्रति विद्यार्थियों में अभिरूचि जागृत करना।

बी.ए. भाग–1
(हिंदी साहित्य) द्वितीय प्रश्नपत्र
हिंदी कथा साहित्य

पूर्णांक: 75
क्रेडिट – 5, 90 कालखण्ड

उद्देश्य एवं प्रस्तावना : गद्य की प्रमुख विधाओं का द्रुत विकास इनकी लोकप्रियता का प्रमाण प्रस्तुत करता है। इसमें आधुनिक जीवन, अपनी विविध कमियों के साथ यथार्थ रूप में अभिव्यंजित हुआ है। जीवन की अनुभूतियां, संवेदनाओं तथा विविध परिस्थितियों के साक्षात्कार के लिए इनका अध्ययन सर्वथा अपेक्षित है।

पाठ्य विषय : व्याख्या एवं आलोचनात्मक प्रश्नों के लिए एक उपन्यास एवं आठ कहानीकारों की एक–एक प्रतिनिधि कहानी का अध्ययन आवश्यक है।

उपन्यासः   1. गबन   –मुंशी प्रेमचंद

कहानी   1. पूस की रात   – मुंशी प्रेमचंद
           2. आकाशदीप   – जयशंकर प्रसाद
           3. परदा   – यशपाल
           4. लाल पान की बेगम   – फणीश्वरनाथ रेणु
           5. मलबे का मालिक   – मोहन राकेश
           6. चीफ की दावत   – भीष्म साहनी
           7. जली हुई रस्सी   – गुलशेर खां शानी
           8. नकली हीरे   – मन्नू भंडारी

द्रुतपाठ के लिए निम्नांकित चार कथाकारों का अध्ययन अपेक्षित है, जिनमें से किन्ही दो पर लघु उत्तरीय प्रश्न पूछे जाएंगे।

1.उपेन्द्रनाथ अश्क   2.बालशौरि रेड्डी   3.शिवानी   4.पदुमलाल पुन्नालाल बख्शी

अंक विभाजन

3 व्याख्याएं	अंक–21
2 आलोचनात्मक प्रश्न	अंक–24
3 लघु उत्तरीय प्रश्न	अंक–15
15 वस्तुनिष्ठ प्रश्न	अंक–15

कुल–75 अंक

इकाई विभाजन :

इकाई एक – व्याख्या   18 कालखण्ड

इकाई दो– गबन(उपन्यास), पूस की रात, आकाशदीप, परदा (कहानियाँ)   18 कालखण्ड

इकाई तीन –लाल पान की बेगम, मलबे का मालिक, चीफ की दावत, जली हुई रस्सी,
नकली हीरे   18 कालखण्ड

इकाई चार –(क) द्रुत पाठ के कथाकार–उपेन्द्रनाथ अश्क, बालशौरि रेड्डी, शिवानी,
पदुमलाल पुन्नालाल बख्शी
(ख) हिंदी कथा साहित्य का विकास   18 कालखण्ड

इकाई पाँच – वस्तुनिष्ठ प्रश्न/अतिलघुउत्तरीय प्रश्न (सम्पूर्ण पाठ्यक्रम से) 18 कालखण्ड

पाठ्यक्रम अध्ययन की परिलब्धियाँ (CLO)

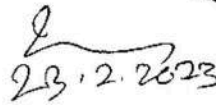1. विद्यार्थियों को हिंदी उपन्यास एवं हिन्दी कहानी की विकास यात्रा से परिचित कराना।

2. उपन्यास एवं कहानी विधा की शिल्पगत विशेषताओं से अवगत कराना।

3. मुंशी प्रेमचंद एवं सुप्रसिद्ध कहानीकारों के व्यक्तित्व, कृतित्व एवं साहित्यिक अवदान से विद्यार्थियों
को परिचित कराना।

4. छत्तीसगढ़ प्रदेश के साहित्यकारों के रचनात्मक कौशल एवं हिंदी कथा साहित्य की अंतर्वस्तु की
समझ विकसित करना।

23.2.2023
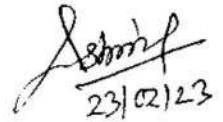
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बी. ए. प्रथम, प्रश्न पत्र प्रथम **B. A. First Paper 1st** पूर्णांक 75

राजनीतिक सिद्धान्त Political Theory
COURSE OUTCOMES

Theory is the starting point of any social sciences that is why political theory is almost universal in BA part one syllabus of political science. Therefore it is pertinent to make students acquainted with proposed course to the students with fundamental theories of political science. Basic Knowledge of important concepts such as Liberty, Justice, Citizenship, Representation, rule of law . Role of political theory to understand political science and political life as well.

	COURSE SPECIFIC OUTCOMES After completion of the course, the student shall have a fair idea about
CSO 1	The meaning of nature and scope and scientific instinct of political science .
CSO 2	The state as a core concept of political science . Its evolution theories and relation with individuals .
CSO 3	The role of liberty and the question of equality in democracy . Evolution of democracy and its theories .
CSO 4	The concept of constitution, separation of powers and theory of representation.
CSO 5	The functional machinery of electoral democracy like political party system and pressure groups. Role of State as welfare agency , and as an agency of social change .

10. Andrew Shorten (2016) Contemporary Political Theory, Palgrave Macmillan, London.

11. David Held (ed.) (1991) Political Theory Today, Stanford University Press.

12. Sushila Ramaswamy (2015) Political Theory: Ideas & Concepts, PHI Learning Private Limited, Delhi.

13. Adi H. Doctor (1985) Issues in Political Theory, Sterling Publishers Pvt. Ltd. New Delhi

14. A. C. Kapoor (2009) Principles of Political Science, S. Chand Publishing, Delhi.

15. Eddy Asirvatham & K.K. Mishra (2010) Political Theory, S. Chand Publishing Delhi.

16. Vidya Dhar Mahajan (2013) Political Theory (Principles of Political Science), S. Chand Publishing, Delhi.

आशीर्वादम (1985) : राजनीतिक सिद्धांत - एस चन्द एण्ड कम्पनी । नई दिल्ली ।

अंबादत पंत हरिमोहन जैन मदन गोपाल (1985) : राजनीतिक सिद्धांत - । सेन्ट्रल पब्लिशिंग हाउस। इलाहाबाद । उ.प्र.

शकील हुसैन (2018) : राजनीतिक सिद्धांत : अवधारणात्मक परिचय । छ.ग. राज्य हिन्दी ग्रन्थ अकादमी . रायपुर, छ. ग

https://youtu.be/o05gcwF3_Mk

Note: Students may consult online Research Articles from JSTOR, swayam, mooc google scholar, google website and other related online websites.

बी. ए. प्रथम प्रश्न पत्र द्वितीय B. A. FIRST PAPER 2nd पूर्णांक 75

भारतीय शासन एवं राजनीति
Indian Government and Politics

COURSE OUTCOMES

Proposed course acquaints the students with values and the struggle of national movement . Explains constitutional development as backdrop of Indian constitution . This course makes students familiar with knowledge and execution of the Indian constitution and political system .

COURSE SPECIFIC OUTCOMES

After completion of the course, the student shall have a fair idea about

CSO 1	The values and importance of freedom struggle and constitutional development in the making of Indian constitution and evolution of our democratic system and substantive democracy .

CSO 2	The basic features , fundamental rights , directive principles of state and amendment process of the constitution.
CSO 3	The constitutional provisions and functioning of the union executive and legislature.
CSO 4	The constitutional plan of the Judicial system of the country and state executive.
CSO 5	State legislature to the election commission of India, electoral democratic processes like caste-politics interaction , communalism etc .

इकाई 1
असहयोग आन्दोलन, सविनय अवज्ञा आन्दोलन, भारत छोड़ो आन्दोलन । भारत का संविधानिक विकास , 1909 1919 और 1935 का अधिनियम ।

Unit 1

Non-cooperation Movement, Civil Disobedience Movement, Quit India Movement. Constitutional Development of India Acts of 1909, 1919 and 1935.

इकाई 2
भारतीय संविधान : प्रस्तावना, विशेषताएं, स्रोत, । मौलिक अधिकार, मूल कर्तव्य, नीति निर्देशक तत्व । संविधान संशोधन प्रक्रिया ।

Unit 2:

Constitution of India :Preamble, features, Sources. Schedules,citizenship.Fundamental Rights and Duties, Directive Principles of State Policy. Constitution Amendment Process.

इकाई 3

राष्ट्रपति, उपराष्ट्रपति , मन्त्रिपरिषद् और प्रधानमन्त्री । संसद - लोकसभा और राज्यसभा । सर्वोच्च न्यायालय संगठन कार्य अधिकार , न्यायिक पुरावलोकन । नियंत्रक एवं महालेखा परीक्षक । निर्वाचन आयोग ।

Unit 3:

President, Vice President, Council of Ministers and Prime Minister. Federal Parliament Lok Sabha and Rajya Sabha. Supreme court - Organization Functions, Powers, Judicial Review. Judicial Activism. Election, comptroller and auditor general .

इकाई 4

राज्य विधायिका, राज्यपाल मन्त्रिपरिषद् और मुख्यमन्त्री । राज्य उच्च न्यायालय - संगठन , कार्य अधिकार ।

Unit 4:

Legislature, Executive: Governor, Council of Ministers and Chief Minister. State High Court - Organization , Functions, Rights.

इकाई 5:

SOCIOLOGY
B.A. PART-I
Paper – I
INTRODUCTION TO SOCIOLOGY
(Paper Code – SO-105)

Maxi. Marks- 75

UNIT-I   **Sociology**: Meaning, Nature, Scope, Subject Matter and Significance.
Basic concept: Society, Community, institution, Association, group, Status and role.

UNIT-II   **Social Institutions**: Family, Marriage and Kinship.
Culture and Society: Culture, Socialization, The individual and society, social control, norms, values.

UNIT-III   **Social Stratification**: Mobility - Meaning forms and theories.
Social Mobility: Meaning forms and theories.

UNIT-IV   **Social change**: Meaning and Pattern, types, factors, evolution and progress.

UNIT-V   **Social Systems and Processes**: Social System – Meaning, characteristics and elements.
Social process: Meaning, elements, characteristics and types.

Recommended Books:
1 Bottomore T.B., Sociology- A guide to Problems and Literature, Bombay. George Allen and unwin(India) 1972.
2 Inkeles, Alex, What is Sociology ? New Delhi, Prentice Hall of India 1987.
3 Jayram, N- Introdutory Sociology, Madras MaCmillan India 1988.
4 Johnson Harry, M., Sociology of systematic Introduction New Delhi Allied Publishers 1995.

SOCIOLOGY
B.A. PART-I
PAPER-II
CONTEMPORARY INDIAN SOCIETY
(Paper Code- SO-106)

Maxi. Marks- 75

UNIT-I **Classical View about Indian Society** :: Verna, Ashram, Karma, Dharma and Purusharth

UNIT-II **The Structure and composition of Indian Society.**
Structure: Village, Towns, Cities and Rural – Urban Linkage.
Compositions: Tribes, Dalits, Women and Minorities.

UNIT-III **Basic Institutions of Indian Society**
Caste system, Joint Family, Marriage and Changing dimensions.

UNIT-IV **Familial Problems:** Dowry, Domestic violence, Divorce, Intra-intergenerational conflict, problem of elderly.

UNIT-V **Folk Culture of Chhattisgarh-** A. Customs, B. Traditions, C. Food Habits and D. Festivals

Recommended Books:

1. Dube, S.C. 1995. Society in India, New Delhi: National Book Trust.
2. Mandelbaum, D.G. 1970. Society in India, Bombay : Popular Prakashan.
3. Shrinivas, M.N. 1973. Social Change in Modern India, California : University of California Press.
4. Shrinivas, M.N. 1973. Social Change Structure, New Delhi : Hindustan Publishing Corporation.
5. Uberoi Patricia, 1993. Familly and Marriage in India, New Delhi : Oxford University press.

SHAHEED NANDKUMAR PATEL VISHWAVIDYALAYA, RAIGARH (C.G.)

(A State University Established Under Chhattisgarh Vishwavidyalaya Adhiniyam, 1973)

Scheme and Syllabus

of

Bachelor of Commerce

Year- First

W.E.F. Session:- 2023-24

Syllabus Approved by the Central Board of Studies

CENTRAL BOARD OF STUDIES-COMMERCE-PROPOSED SYLLABUS

Class Name	B.Com. Part- 1 (CCC-2022)
Paper Code	Paper 3 CC-2201
Title of Subject	Financial Accounting
Objective	The course aims to help learners to acquire conceptual knowledge on financial accounting to impart skills for recording various kinds of business transactions with G.S.T. and to prepare financial statements
Max Marks – 75+25	Min Marks 25+10
Credit Value	5

Detailed Syllabus

Units	Content of the syllabus	No. of lectures
Unit- 1	Accounting: An introduction: Development, Definition, Needs, objectives, Branches of Accounting, Basic Accounting principles concept and conventions Accounting standard: National & International Accounting Transaction: Concept of Single and Double entry system, Books of original Records, journal, ledger, sub division of journal cash book (including GST Transaction) and Trial balance	15
Unit- 2	Final Accounts: Manufacturing Accounts, Trading Accounts, Profit Loss Account, Balance Sheet, Adjustment Entries with various provision and reserves. Rectifications of Errors: Classification of errors, location of errors, Rectification of errors, Suspense account, Effect on profit Depreciation accounting; methods of recording depreciation, methods for providing depreciation, Depreciation of different assets; Indian accounting standard and Income Tax,	15
Unit- 3	Computerized Accounting System (using any popular accounting software); Creation of Vouchers; recording transactions; preparing reports, cash book, bank book, ledger accounts, trial balance, Profit and loss account, Balance Sheet, Fund Flow statement, Cash Flow Statement, Selecting and shutting a Company, Backup and Restore data of a Company.	15

Unit- 4	Accounting for Hire-Purchase Transaction, Journal entries and ledger account in the books of Hire Venders and Hire purchase for large value items including Default and repossession. Consignment: Features, Accounting treatment in the books of the consignor and consignee. Accounting for Inland Branches: Concept of dependent and Independent branches, accounting aspects, debtor's system, stock and debtor's system, branch final accounts system and wholesale basis system. Preparation of consolidated profit and loss accounts and balance sheet with adjustment	15
Unit- 5	Joint Venture: Features, Accounting procedures, Joint Bank account, Records Maintained by Co-venturer of(a) all transactions (b) only his own transactions. (memorandum joint venture account). Partnership Account: Dissolution of a partnership firm, Amalgamation of partnership Firms, Conversion of partnership firm into limited liability Company	15
Case study/Skill based activities/field work/project work etc. (for extra credit)		
Learning out come	1. Apply the generally accepted accounting principle while recording transactions with G.S.T.and preparing financial statement. 2. Demonstrate accounting process under computerized accounting system. 3. prepare cash book and other account necessary while running a business. 4. Evaluate the importance of depreciation 5. prepare dissolution and Amalgamation account of partnership firm:	

Suggested Readings:

01. Gupta, R.L. and Radhaswamy. M; Financial Accounting Sultan Chand and Sons , New Delhi.
02. Monga J.R. Ahuja Girish and Sehgal Ashok: Financial Accounting ; Mayur Paper Back, Noida.
03. Shukla M.C. Grewal T.s. and Gupta , S.C. : Advanced Accounts; S. Chand & Co. New Delhi.
04. Singh B.K. Financial Accounting ; Wisdom Publishing House, Varanasi.
05. Shukla S.M.; Financial Accounting ; Sahitya Bhawan Publication ; Agra.
06. Karim & Khanuja; Financial Accounting; SBPDPublishing House; Agra.
07. Agrawal & Mangal; Financial Accounting Universal Publication.

Name And Signature of members

Chairman	HOD PG Department	HOD UG Department	Subject Expert
1	1	1	1 (Bhatta) (C. A. Bhatta)
2	2	2 K.S. Pusam	2
3 7/06/22	3	3 R.K. Heskar	3 A.H. Khan
4	4 Sandhya Brand	4	4
5	5	5	5
6			

CENTRAL BOARD OF STUDIES-COMMERCE-PROPOSED SYLLABUS

Class Name:	B.Com. Part I (CCC-2022)
Paper Code/Paper No.	Paper – 4 (CC- 2202)
Title of Subject:	**Business Communication**
Objectives:	The course Aims to impart the learner's skill in reading writing comprehension and communication in business field especially using electronic media.
Max Marks – 75+25	Min Marks 25+10
Credit Value	5

Detail Syllabus

Units	Content of the Syllabus	No. of Lectures
Unit 1	Introducing Business Communication: — Definition, Concept and Significance of communication. Basic forms of communications; communication Models and Process: Principal of Effective communication; Theories of communication; Self-Development and Communication Development of Positive personal attitude. SWOT analysis. Communication: Ethics. Business Language.	15
Unit 2	Corporate communication: Formal and Informal communication Network; Grapevine; Miscommunication (Barriers) and improving communication, Practices in Business communication - Group Discussions. Seminar. effective listening. - Principle of effective listening, Factor of effective - listening exercises, Oral. Written and Video session, Audience analysis and feedback.	15
Unit 3	Writing skill - Business letters — Definition, Concepts, Structure, Advantage, Disadvantage. need and kinds of business letter. Essentials of Effective Business letter, Good news and bad New letters, Office memorandum Writing Resume and letter of Job Application.	15
Unit 4	Report Writing: Introduction to a Proposal, Short report and formal report, report preparation. Oral Presentation Principles of Oral Presentation, Factor effecting Presentation, Sales Presentation, Training Presentation, conducting surveys, Speeches to Motivate, Presentation skill.	15
Unit 5	Non- V e r b a l Aspects of communicating, Body Language: K kinesics, Proxemics, Para Language. Interview skills: Appearing in Interviews; Conducting I interview; mock Interview. Modem for ins of Communicating: Fax; E-Mail; video Conferencing; etc. international Communication for globe business.	15
Case study/Skill based activities/field work/project work as applicable (for extra credit)		
Learning Out comes	1- Know Various forms of Communication, Communication Barriers.	
	2- Comprehend a variety of Business Correspondence and respond Appropriately.	
	3- Use appropriate Grammatical Constructions and Vocabulary to Communicate Effectively.	

CENTRAL BOARD OF STUDIES-COMMERCE-PROPOSED SYLLABUS

Class Name:	B.COM Part-I (CCC-2022)
Paper Code/Paper No:	Paper-5 (CC-2203)
Title of Subject:	Business Mathematics
Objectives:	To enable the students to have such minimum knowledge of mathematics as is applicable to business and economic situations
Max marks: 75 + 25	Min. Marks: 25+10
Credit Value	5

Detail Syllabus

Unit	Content of Syllabus	No. of Lectures
Unit- 1	**Average:** Meaning, characteristics, uses, merits & demerits and limitations **Simple and combined average**, change in term value, speed average, weighted average, algebraic problems! Calculation of average in case of large number of terms. **Ratio**- Meaning and characteristics, comparison of ratios, division of ratios, calculation of real numbers on basis of ratios, adding or subtracting the same number in terms of ratio, practical use of ratio in business and consolidation. **Proportion**- Meaning, Characteristics, Difference in ratio and proportion, Problems related to Continuous Proportion, Indices Proportion, Mix ratio. **Percentage**- Meaning and utility, rules related to percentage, number, election, examination, income expenditure, consumption, mixture, problems related to population.	15
Unit- 2	**Commission and Brokerage**- Meaning, types of business agency, cash and redemption transactions, commission before and after bonus benefits, problems related to the word prior/ due amount. **Discount**- Meaning and types, problems related to trading discount, cash discount, sequential discount and equivalent discount rate. **Profit and Loss**- Cost or purchase price, selling price, profit, loss, gross profit, concept of gross profit, percentage profit loss, purchase and sale price, more than one buyer and seller, dishonesty, adulteration, discount, commission related problems.	15
Unit- 3	**Matrices**-Meaning and definitions, types of matrix, Algebra of matrix, transposed matrix **Determinants**-Meaning and definitions, minor, co-factor, calculation of values of determinants up to third order, Laplace's method, Sarru's method **Preparation of Invoice**-Meaning, Contents, Advantages and types of Invoice, Methods of preparing Invoice.	15
Unit- 4	**Logarithms and Antilogarithms**-Meaning, properties, fundamental laws and types, practical use of logarithm and antilogarithm table **Simple and Compound interest**- Principal, amount, concept of real and nominal rate of interest, difference between simple interest and compound interest, practical problems related to interest, time, rate, principal and amount. Calculation of interest by third, tenth and tenth rule and common multiplier method.	15

Unit- 5	**Vedic mathematics** -Brief history of Vedic mathematics in Indian knowledge tradition, methods and practice of quick calculation of addition, multiplication, division, square and square root of numbers through Vedic mathematics, method of quick verification of answers from Digit Sum. **Simultaneous equations**-Meaning, characteristics, methods of solving equations in two variables- Graphical, Substitution, Elimination and Cross multiplication.	15

Keywords/Tags: Vedic mathematics, Logarithms, Simultaneous Equations, Ratio, Proportion, Discount, Brokerage, Commission, Average, interest

Case study/Skill based activities/field work/project work etc. (for extra credit)	
Learning Out comes	1.To apply basic terms of integration in solving practical problems field of as of business. To explain basic methods of business calculus, types and methods of interest account and their basic applications in practice. 2.To solve problems in the areas of business calculus, simple and compound interest account, use of compound interest account, loan and consumer credit. 3.To discuss effects of various types and methods of interest account. 4. Connect acquired knowledge and skills with practical problems in economic practice.

Suggested Books

1. Dr. Karim & Agrawal, Business Mathematics SBPD Publishing house, Agra(Both Hindi & English medium)
2. Magar Dr. Abhilasha Business Mathematics Himalaya publication Mumbai
3. Sancheti & Kapoor Business Mathematics Sultan chand and sons New Delhi
4. Sharma J.K. Business Mathematics IK International pvt. Ltd. New Delhi
5. Kumar Mrityunjay Business Mathematics S. Chand Publishing New Delhi
6. Agrawal Dr. Mahesh Business Mathematics Ramprasad and sons Bhopal

Name and Signature of Member

Chairman		HOD PG Department		HOD UG Department		Subject Expert
1		1		1	*Shashi*	1 (Bhatta) *C.A.Bhatta*
2	R.K.Agrawal 01/06/22	2		2	K.S. Pusam	2
3		3		3	Dr. R.K. Tewari	3 A.H.KUAH
4		4	Sandhya Pramod	4		4
5		5		5		5
6		6		6		6

CENTRAL BOARD OF STUDIES-COMMERCE-PROPOSED SYLLABUS

Class Name	B.Com – 1st Year (CCC-2022)
Paper Code/Paper No.	Paper – 6 CC-2204
Title of Subject :	Business Regulatory frame work
Objectives:	To provide a brief idea about the framework of Indian business laws
Max Marks – 75 + 25	Min Marks- 25 + 10
Credit Value	5

Detailed Syllabus

Units	Content of the Syllabus	No. of Lectures
Unit -1	Law of contract (1872) –I : Nature of contract classification; offer and acceptance.; capacity of parties to contract, free consent, considerations, Legality of object; Agreement declared void.	15
Unit-2	Special contracts; Indemnity & Guarantee, Bailment and pledge; Law of Agency- Meaning, Modes of creating Agency, Types of Agents, Personal Liability of an Agent and Termination of Agency.	15
Unit -3	Sale of Goods Act (1930): Definition, Sale & Agreement to sell, Types of Goods, Conditions & Warranties, Sale by Non-owners, Unpaid Seller, CIF, FOB and Ex-Ship Contracts.	15
Unit 4	Negotiable Instrument Act (1881) Definition of Negotiable instrument; Feature; promissory note; Bill of exchange cheque; Holder and holder in the due course; crossing of a cheque, types of crossing; Negotiation; dishonor and discharge of negotiable instrument, Information technology Act 2000 and cybercrime Act 2012 related to e- Business only.	15
Unit - 5	The consumer protection Act 2019: Main provision, Definition of consumer, consumer Disputes, Grievances redressal machinery; Indian partnership Act1932, Limited Liabilities partnership Act 2008, Introduction of Intellectual property Right Act – Copyright, Patent & Trademark.	15

Case study/Skill based activities/field work/project work as applicable (for extra credit)		
Learning out comes	1	To know the students with the basic concept terms & provisions of mercantile and business laws.
	2	To develop well verse in basic provisions regarding legal framework governing the business world.
	3	Knowing the rights and liability of every citizen regarding consumer protection act.

Suggested Readings: Book
1. Kuchal M.C. Business Law: Vikas publishing house, Delhi. (English Medium)
2. Lapoor N.D.: Business Law; Sultanchand & Sons, New Delhi. (English Medium)
3. Chandha P.R.: Business Law; Galgotia New Delhi. (English Medium)
4. Dr. J.K. Vaishnav: Business Law; Sahitya Bhawan Publication Agra (English Medium)

Name and Signature of Member

	Chairman		HOD PG Department		HOD UG Department		Subject Expert
1		1		1	shastri	1	Bhatta
2		2		2	K.S. Puram	2	
3		3		3	Dr. R.K.	3	A.H.KHAN
4	HOD	4	Sandhya	4		4	
5		5		5		5	

CENTRAL BOARD OF STUDIES-COMMERCE-PROPOSED SYLLABUS

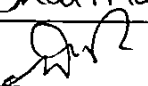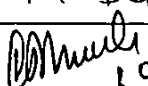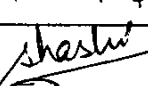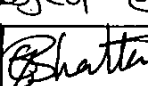| Class Name	B. Com Part-I (CCC-2022)
Paper Code/ Paper No.	Paper – 7 (CC-2205)
Title of Subject:	Business Environment
Objectives:	1. To acquaint students with the local and global environment of business.
	2. To acquaint students with the economic, political and technological environment in business
	3. To acquire in - depth knowledge of govt. policies and legal environment of business.
Max Marks 75+25	Min Marks 25+10
Credit Value	5

Detailed Syllabus
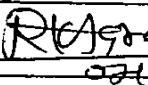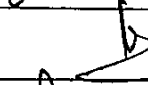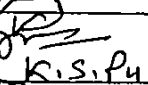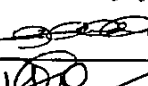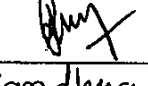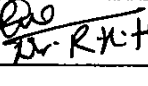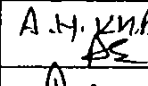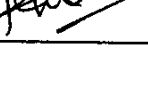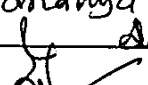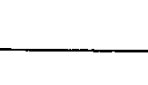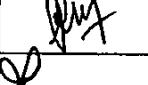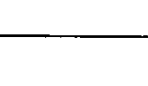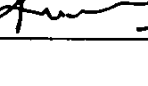
Unit	Content of Syllabus	No. of Lecturers
Unit- 1	**Business Environment:** Type of Environment-internal, external, micro and macro environment. Competitive structure of industry, environmental analysis and strategic management. Managing diversity. Scope of business, characteristics of business. Objectives and the uses of study. Process and limitations of environmental analysis.	15
Unit- 2	**Economic Problem of Growth:** Inflation Parallel Economy Industrial Sickness **Economic Factors of Growth:** Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI), Micro, Small and Medium Enterprises (MAMEs)	15
Unit- 3	**International Environment:** Trends in World Trade & The Problems of Developing Countries, Foreign Trade & Economic Growth, **International Economic Groups:** GATT, WTO, UNCTAD, World Bank, IMF, TRIPS, TRIMS **Regional Trade Agreements:** European Union (EU), ASEAN, SAARC, NAFTA	15
Unit- 4	**Govt. Policies:** Export-Import Policy, Monetary & Fiscal Policy, Privatization, Liberalization, Globalization, Demonetization, Disinvestment, Foreign Exchange Management Act 2000 Industrial Policy, Industrial Licensing (National & State)	15
Unit- 5	**Economic Planning:** Need, Objective, Strategy, Review of Previous Plan, NITI AAYOG, Gross Domestic Product : Meaning, Characteristics, calculation and impact in employment & productivity with refence to India & Chhattisgarh. **Economic Environment in Chhattisgarh:** Economic of Chhattisgarh – Its Basic Feature, Population of Chhattisgarh and Its Characteristics. Industry and Industrial Development in Chhattisgarh Mineral & Mineral Based Industry in Chhattisgarh. Agriculture in Chhattisgarh. Forest & Forest Produce in Chhattisgarh. Development of Power in Chhattisgarh. Development of Transport in Chhattisgarh.	15
Case study/Skill based activities/field work/project work as applicable (for extra credit)		

Learning Out comes	1. Understand relationship between environment and business Applying the environment analysis techniques in Practice. 2. The students will be able to demonstrate and develop conceptual framework of business environment and generate interest in international business. 3. Familiarize with the Nature of local business environment and its component. 4. Acquaint students with govt. policies and different roles for the emergence, upliftment and smooth functioning of business organization.

Suggested Readings:

01. Sheikh Saleem, Business Environment, Pearson
02. Francis, Cherunilan, Business Environment, Himalaya Publishing House
03. Gupta C.B., Business Environment Sultan Chand & Sons
04. Paliwar Veena Keshav, Business Environment, PHI Learning Private Limited, Delhi
05. Singh Ranjeet ,Business Environment, Kalyani Publishers New Delhi
06. Sinha V.C., Business Environment (Hindi & English), SBPD Publications Agra
07. Upadhyay Sharma Dayal, Business Environment (Hindi), Ramesh Book Depot Jaipur
08. Singh, Dr. S.K., Business Environment (Hindi), Sahitya Bhawan Publication Agra
09. Jain Dr. S.C., Business Environment (Hindi), Kailash Pustak Sadan, Bhopal
10. Joshi Rosy, Kapoor Sangam, Business Environment (Hindi), Kalyani Publishers New Delhi

Name and Signature of Member

Chairman	HOD PG Department	HOD UG Department	Subject Expert
1	1	1	1
2	2	2	2
3	3	3	3 A.H. KHAN
4	4 Sandhya Prajapl	4	4
5	5	5	5
6			

CENTRAL BOARD OF STUDIES-COMMERCE-PROPOSED SYLLABUS

Class Name	B.Com.1st Year (CCC-2022)
Paper Code/ Paper No.	Paper- 8 (CC-2206)
Title of Subjects:	Business Economics
Objectives:	The course aims to acquaint the learners with fundamental economic theories and their impact on pricing, demand, supply, production, and cost concepts.
Max Marks 75 +25	Min Marks: 25 + 10
Credit Value	5

	Detailed Syllabus	
Units	Content of the Syllabus	No. of Lectures
Unit-I	**Introduction:** Micro &Macro Economics Meaning, Scope, Importance and limitations, nature, Distinguish between Micro &Macro Economics **Business Economics** Meaning, Definition, objective and nature & Scope, Role and Responsibilities of a business Economist. **Market Demand Analysis**: Meaning of Demand and Determinants of Demand, Changes in Demand, Demand Function Law of Demand, Types of Demand and Exceptions of Law of Demand	15
Unit-2	**Consumer Behaviour and Elasticity of Demand:** Utility Analysis of Demand, Law of Diminishing marginal utility & Consumer Surplus, Indifference Curve technique, Price Line or Budget Line , Concept of Elasticity of Demand, Importance, Types, Calculations of different concepts of Elasticity, Methods of measurement of Price Elasticity of Demand	15
Unit-3	**Production Analysis:** Meaning of Supply and Supply function, Concepts of Stock and Flow, Determinants of Supply, Law of Supply, Changes in Supply, Production Function: a) Law of Variable Proportions b) Law of Returns to Scale, Economies and Diseconomies of Scale	15
Unit-4	**Market Morphology and Equilibrium of the Firm and Industry:** Meaning, Classification and Types of Market, Market structure formed on the basis of perfect and imperfect competition, Price and output determination under Perfect Competition, Price and Output determination under monopoly, Discrimination Monopoly- Features, Price and Output determination under discriminating Monopoly, Price and Output determination under Monopolistic Competition, Oligopoly	15
Unit-5	**Chhattisgarh Economy**- Price Control- Price ceiling and price floor, Study of Chhattisgarh economy, Prospects of economy development, Economic Survey of Chhattisgarh	15
	Case study/Skill based activities/field work/project work etc. (for extra credit)	

Learning Out comes:	1	Examine how different economic systems function and evaluate implications of various economic decisions;
	2	Examine how consumers try to maximize their satisfaction by spending on different goods;
	3	Analyze the relationship between inputs used in production and the resulting outputs and costs;
	4	Analyze and interpret market mechanism and behaviour of firms and response of firms to different market situations
	5	Examine various facets of pricing under different market situations.
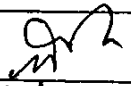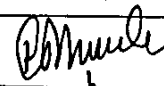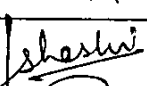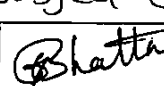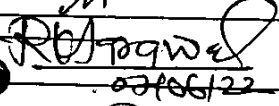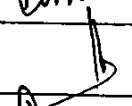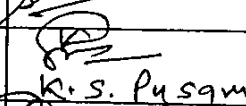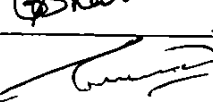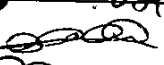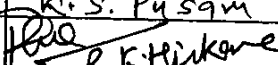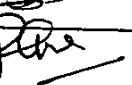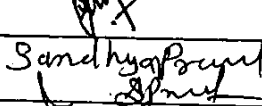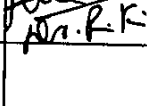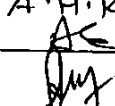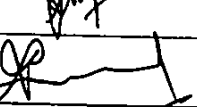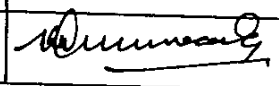
Suggested Readings:

1. Ahuja, H. L. (2019). Theory of Micro Economics. New Delhi: Sultan Chand Publishing House.
2. Koutsoyannis, A. (1975). Modern Microeconomics. London: Palgrave Macmillan.
3. Chaturvedi, D. D., & Gupta, S. L. (2010). Business Economics Theory & Applications. New Delhi: International Book House Pvt. Ltd.
4. Kennedy, M. J. (2010). Micro Economics. Mumbai: Himalaya Publishing House.

Websites:

1. Relevant study material of ICAI: www.icai.org.
2. https://www.icsi.edu/media/website/Business%20Economic
3. https://www.businesseconomics.com/

Name and Signature of Member

Chairman		HOD PG Department		HOD UG Department		Subject Expert	
1		1	*Mundl*	1	*shashi*	1	*Bhatia*
2	*RB Togwe* 07/06/22	2		2	*K. S. Pusam*	2	
3		3		3	*Dr. R. K. Hinkar*	3	*A. H. KHAN*
4		4	*Sandhya Band*	4		4	
5		5		5		5	
6							

SHAHEED NANDKUMAR PATEL VISHWAVIDYALAYA, RAIGARH (C.G.)

(A State University Established Under Chhattisgarh Vishwavidyalaya Adhiniyam, 1973)

Scheme and Syllabus

Of

Bachelor of Science

Year- First

W.E.F. Session :- 2023-24
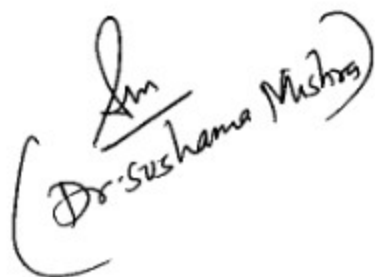
Syllabus Approved by the Central Board of Studies

Central Board of Studies Foundation Course Paper-II
English Language for Under Graduate Students

Programme Outcomes for English Language B.A/B.Sc/B.Com I, II, III

The programme enables a student to get acquainted

- With the rich cultural heritage and develops patriotic feelings through the works of Indian authors & poets.
- To get exposure of the usage of grammar according to contemporary times.
- To have an exposure about the literary genre with the help of the authors & poets across the globe.
- To develop an appreciation for English Language & Communication Skills.

27/6/23

(PC Chaudhry)

(Dr. Sushama Mishra)

Learning Outcomes (English Language) B.A/B.Sc/B.Com - I, II,III

The learning outcomes are as follows:

1. To strengthen the linguistic skills -Listening, Speaking, Reading and Writing.

2. To refine the way of thinking and speaking which would lead them to have mighty ideas in day to day life.

3. To improve students speaking ability in English both in terms of fluency and comprehensibility.

4. To enhance practical use of English in day-to-day life.

5. To enrich the vocabulary of the students.

(Dr. Sushama Mishra)
12.6.2023

(P Cehondnry)
2/6/23

Programme Specific Outcomes FC_ Paper-II
(English Language) B.A/B.Sc/B.Com - I, II,III

The Programme Specific outcomes are as follows:

1. To develop abilities of the students as a critical reader and writer.

2. To develop the ability of public interaction and speaking.

3. To develop self awareness about English language.

4. To develop critical thinking .

To give a practice in writing, drafting of English assignments.

(Dr. Sushama Mishra)

2/6/23

(P C Chaturvedi)

बी.ए./ बी.एस-सी./ बी.कॉम./ बी.एच.एस.सी. भाग -एक

(आधार पाठ्यक्रम)

प्रथम प्रश्नपत्र

हिंदी भाषा

कोड....   पूर्णांक 75
                                                  क्रेडिट 05

पाठ्यक्रमका उद्देश्य:-

1. हिंदी भाषाके प्रयोजनात्मक स्वरूप का सामान्य ज्ञान प्रदान करना।

2. कंप्यूटर में हिंदी भाषा के प्रयोग की आवश्यकता के अनुरूप कंप्यूटर की कार्य प्रणाली की आरंभिक जानकारी से अवगत होने के लिए प्रेरित करना।

3. हिंदी व्याकरण की बुनियादी ज्ञान संप्रेषण कौशल तथा भाषायी दक्षता से अवगत कराना।

4. साहित्य और समाज को समझने की दिशा में रुझान उत्पन्न करना।

पाठ्य विषय:-

इकाई 1. (क) पल्लवन, पत्राचार, अनुवाद (ख) एक टोकरी भर मिट्टी : माधवराव सप्रे बड़े भाई साहब : प्रेमचंद	अंक 15 18 कालखंड
इकाई 2. (क) संक्षेपण, हिंदी में संक्षिप्तिकरण, हिंदी-अपठित गद्यांश, पारिभाषिक शब्दावली, हिंदी में पदनाम, मुहावरे एवंलोकोक्तियाँ (ख) जागो फिर एक बार: सूर्यकांत त्रिपाठी 'निराला' जन्मदिन ('मिट्टी से कहूँगाधन्यवाद' संग्रह से): एकांत श्रीवास्तव	अंक 15 18 कालखंड
इकाई 3. (क) शब्द-शुद्धि, वाक्य-शुद्धि, शब्द-ज्ञान- पर्यायवाची शब्द, विलोम शब्द, अनेकार्थी-शब्द, समश्रुत शब्द, अनेक शब्दों के लिए एक शब्द (ख) भोलाराम का जीव : हरिशंकर परसाई जीप पर सवार इल्लियां: शरद जोशी	अंक 15 18 कालखंड
इकाई 4.(क) मानक भाषा का अर्थ, मानक हिंदी भाषाका अर्थ, स्वरूप,	अंक 15

23.02.2023   23/2/23   23/2/23   23/2/23

23-2-2023

Part A: Introduction

Program: **Certificate course in Microbial Techniques and Archaegoniate identification**	Class: **B.Sc.I Year**	Year: **2022**	Session:**2022-2023**
1.	Course Code	\	BOT-1T
2.	Course Title	\	**Microbial Diversity and Plant Pathology**
3.	Course Type	\	**Theory**
4.	Pre-requisite (if any)	\	NO
5.	Course Learning. Outcomes (CLO)	\	At the end of this course, the students will be able to • Understand the Viruses, Bacteria, Phycology, Mycology and Plant pathology • Learn microbial techniques which will be beneficial for agriculture and industry. • Learn life cycles of selected genera of different groups • Understand etiology of plant diseases • Apply their knowledge in the crop fields to eradicate or avoid the diseases • Apply different biofertilizers to enhance productivity
6.	Credit Value	\	**Theory: 4**
7.	**Total Marks**	**Max. Marks: 50**	**Min Passing Marks: 17**

Part B: Content of the Course

Total Periods: 60

Unit	Topics	No. ofPeriod
I	**Microbial Techniques & instrumentation:** Microscopy – Light, phase contrast, scanning and transmission electron microscopy, staining techniques for light microscopy. Common equipment of microbiology lab and principle of their working – autoclave, oven, laminar air flow, centrifuge, colorimetry, spectrophotometry, electrophoresis, immobilization methods, fermentation and fermenters.	12
II	**Microbial world:** Cell structure of Eukaryotic and prokaryotic cells, Gram positive and Gram-negative bacteria, Structure of bacteria; Bacterial Growth curve, factors affecting growth of microbes; Sporulation, reproduction, recombination in bacteria. Viruses, general characteristics, Structure of viruses, Bacteriophages and TMV; Lytic and Lysogenic cycles, viroid, Prions & mycoplasma, phytoplasma, actinomycetes and their economic uses. **Applied Microbiology:** Food fermentations and food produced by microbes, Production of antibiotics, enzymes, alcoholic beverages, Lactic acid and Acetic acid production. Antigen, antibody and production of monoclonal antibodies (Hybridoma techniques).	12
III	**Phycology:** General characteristic features, classification and range of thallus organization. Classification and life cycle of –*Volvox, Oedogonium, Chara, Vaucheria,Ectocarpus* and *Polysiphonia.* Economic importance of algae - Role of algae in soil fertility, algae as biofertilizer , blue green algae and nitrogen economy of soil; algae as biofuel	12

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Part A: Introduction

Program:**Certificate course in Microbial techniques and Archaegoniate identification**	Class: **B.Sc. I Year**		Year: **2022**	Session:**2022-2023**
1.	Course Code		**BOT-2T**	
2.	Course Title		**Archegoniateae and Plant Architecture**	
3.	Course Type		**Theory**	
4.	Pre-requisite (if any)		NO	
5.	Course Learning. Outcomes (CLO)	At the end of this course, the students will be able to • Understand the General characteristics and affinities of Bryophytes, Pteridophytes and Gymnosperms • Phylogenetic relationships with the help of Palaeobotanical studies • Learn morphology, and- flower architecture of angiosperms		
6.	**Credit Value**	**Theory: 4**		
7.	**Total Marks**	**Max. Marks: 50**		**Min Passing Marks: 17**

Part B: Content of the Course

Total Periods: 60

Unit	Topics	No. ofPeriod
I	**Introduction to Archegoniates & Bryophytes:** Unique features of archegoniates, Bryophytes: General characteristic features and Affinities, adaptations to land habit, Range of thallus organization. Classification (up to family), morphology, anatomy and reproduction *of Riccia, Marchantia , Anthoceros* and *Sphagnum.* (Developmental details not to be included). Economic importance of bryophytes.	12
II	**Pteridophytes:** General characteristic features and affinities, Classification (up to family) with examples, Heterospory and seed habit, stelar evolution, economic importance of Pteridophytes, Morphology, anatomy and life cycle of *Psilotum, Lycopodium, Selaginella, Equisetum, Pteris* and *Marselia.*	12
III	**Gymnosperms:** Classification and distribution of gymnosperms; Salient features of Cycadales, Ginkgoales, Coniferales and Gnetales, their examples, structure and reproduction; economic importance, Morphology, anatomy and life cycle of *Cycas, Pinus* and *Ephedra.*	12
IV	**Palaeobotany:** General account, Geological time scale; Brief account of process of fossilization & types of fossils and their study techniques; Fossil plants: *Rhynia, Williamsonia, Cycadeoidea.* Contribution of Prof. BirbalSahni	12
V	**Angiosperm Morphology (Stem, Roots, Leaves, Flowers and Inflorescence:** Morphology and modifications of root; Stem, leaf and bud. Types of inflorescences; flowers, flower parts, fruits and types of placentation; Definition	12

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Programme: Certificate		Class B.Sc.-I	Year: 2022	Session: 2022-23
1.	Course Code	BOT-1P		
2.	Course Title	Microbial Techniques and Archegoniate identification		
3.	Course Type	Practical		
4.	Pre-requisite (if any)	No		
5.	Course outcomes:	After the completion of the course the students will be able to: • Understand the instruments, techniques and good lab practices for working in a microbiology laboratory. • Develop skills for identifying microbes and using them for Industrial, Agriculture and Environment purposes. • Practical skills in the field and laboratory experiments in Microbiology & Pathology. • learn to identify Algae, Lichens and plant pathogens along with their Symbiotic and Parasitic associations. • Can initiate his own Plant & Seed Diagnostic Clinic • Can start own enterprise on microbial products		
6.	Credit Value	2		
7.	Total Marks	Max. Marks: 50	Min. Passing Marks:17	

Total No. of Periods – 30

Tentative Practical List	Topic * (Minimum Any three from each unit depending on facilities and syllabus. 20% for spotting, 10% each for viva and sessional and rest 60 % marks equally in each unit.)
	INSTRUMENTS & TECHNIQUES: 1. Laboratory safety and good laboratory practices. 2. Principles and application of Laboratory instruments-microscope, incubator, autoclave, centrifuge, Laminar air flow, filtration unit, shaker, pH meter. 3. Buffer preparation & titration 4. Cleaning and Sterilization of glassware 5. Preparation of media- PDA and NAM 6. Inoculation and culturing of Fungi and bacteria **BACTERIAL IDENTIFICATION:** 1. Isolation of bacteria. 2. Staining techniques: Gram's, staining
	MYCOLOGY: 1. Study/ Slide preparation and . Staining of fungi. *Rhizopus, Saccharomyces, Penicillium, Peziza, Ustilago, Puccinia; Fusarium, Alternaria. Agaricus:*

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Part A: Introduction

Program: **Certificate Course**		Class: **B.Sc. I Year**	Year: **2022**	Session:**2022-23**
1.	Course Code	CHEM-1T		
2.	Course Title	Inorganic and Physical Chemistry		
3.	Course Type	Theory		
4.	Pre-requisite (if any)	To Study this course our students must have had the subject chemistry in class +2 or equivalent		
5.	Course Learning. Outcomes (CLO)	At the end of this course, the students will be able to learn the following aspects of Chemistry • To learn basic concept of atomic structure and the periodic properties of elements • To understand chemical bonding in ionic and covalent compounds • To study group trends for *s* and *p*-block elements in the periodic table • learn properties and bonding of compounds of the noble gases • Understand the metallurgical extraction of metals. • Basic concepts of Mathematics and Computer for Chemists. • Basics and mechanism of chemical kinetics and catalysis.		
6.	Credit Value	Theory: **4**		
7.	Total Marks	Max. Marks: **50**		Min. Passing Marks: **17**

Part B: Content of the Course

Total No. of Lecturers: **90**

Unit	Topics	No. of Lectures
I	**Atomic structure :** Bohr's theory and its limitation, General idea of de-Broglie matter-waves, Heisenberg uncertainty principle, Schrödinger wave equation, significance of Ψ and Ψ^2, radial & angular wave functions and probability distribution curves, quantum numbers, Atomicorbital and shapes of *s*, *p*, *d* orbitals, Aufbau and Pauli exclusion principles, Hund's Multiplicity rule, electronic configuration of the elements. **Periodic properties:** Detailed discussion of the following periodic properties of the elements, with reference to *s*- and *p*- block. Trends in periodic table and applications in predicting and explaining the chemical behavior. a. Atomic and ionic radii, b. Ionization enthalpy, c. Electron gain enthalpy, d. Electronegativity, Pauling's, Mulliken's, Allred Rochow's scales. Effective nuclear charge, shielding or screening effect, Slater rules, variation of effective nuclear charge in periodic table.	15
II	**Chemical bonding- I: Ionic bond:** Ionic Solids - Ionic structures, radius ratio & co-ordination number. limitation of radius ratio rule, lattice defects, semiconductors, lattice energy Born-Haber cycle, Solvation energy and solubility of ionic solids, polarizing power & polarizability of ions, Fajan's rule, Ionic character in covalent compounds: Bond moment and dipole	15

Program: **Certificate Course**		Class: **B.Sc. I Year**	Year: **2022**	Session:**2022-23**
1.	Course Code	CHEM-2T		
2.	Course Title	Organic and Physical Chemistry		
3.	Course Type	Theory		
4.	Pre-requisite (if any)	To Study this course our students must have had the subject chemistry in class +2 or equivalent		
5.	Course Learning. Outcomes (CLO)	At the end of this course, the students will be able to learn the following aspects of Chemistry • Understand the fundamentals of physical organic chemistry • Stereochemistry of carbon compounds • Chemistry of Alkenes and Alkynes • Chemistry of Alicyclic and aromatic Hydrocarbons • Understanding kinetic model of gases and its properties, Behavior of real gases, its derivation from ideal behavior, equation of state, isotherms and Law of corresponding states and molecular velocities. • Fundamental concepts of liquid state and colloids & surface chemistry. • Solids, Lattice parameters – its calculation, application of symmetry, solid characteristics of simple salts.		
6.	Credit Value	Theory: 4		
7.	Total Marks	Max. Marks: 50		Min. Passing Marks: 17

Part B: Content of the Course		
Total No. of Lecturers: 90		
Unit	Topics	No. of Lectures
I	**Basics of organic chemistry**: Influence of hybridization on bond properties (as applicable to ethane, ethene, and ethyne). Application of inductive effect (a) Basicity of amines (b) Acidity of carboxylic acids (c) Stability of carbocations. Resonance or Mesomeric effect, application to (a) acidity of phenol, and (b) acidity of carboxylic acids. Hyper conjugation and its application to stability of carbocations, Free radicals and alkenes. Reactive intermediates: carbanions, carbenes, Nitrene, Basic concept of S_N1, S_N2, E1, E2, E1cb reactions and Neighboring group Participation (NGP). Electrophiles and Nucleophiles; Nucleophilicity and basicity.	15
II	**Introduction to stereochemistry**: Optical Isomerism: Optical Activity, Specific Rotation, Chirality/Asymmetry, Enantiomers, Molecules with two or more chiral-centres, Diastereoisomers, meso compounds, Relative and absolute configuration: Fischer, Newman and Sawhorse Projection formulae and their interconversions; Erythrose and threose, D/L, d/l system of nomenclature, Cahn-Ingold-Prelog system of nomenclature (C.I.P rules),	15

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Part A: Introduction

Program: **Certificate Course**		Class: **B.Sc. I Year**	Year: 2022	Session: 2022-23
1.	Course Code	CHEM-1P		
2.	Course Title	Lab. 1		
3.	Course Type	Practical		
4.	Pre-requisite (if any)	To Study this course our students must have had the subject chemistry in class +2 or equivalent		
5.	Course Learning. Outcomes (CLO)	At the end of this course, the students will be able to learn the following aspects of Chemistry • To analyse the given mixture for anions (acid radicals) and cations (basic radicals). • Titrations • Qualitative Analysis • Surface tension measurements. • Viscosity measurement • Chemical Kinetics		
6.	Credit Value	Practical: 2		
7.	Total Marks	**Max. Marks: 50**		**Min Passing Marks: 17**

Part B: Content of the Course

Total No. of Lecturers: 30

LABATORY COURSE		No. of Lectures
Tentative list of Practical	**A. Inorganic chemistry** Semi-micro qualitative analysis (using H_2S or other methods) of mixtures - not more than four ionic species (two anions and two cations, excluding interfering, insoluble salts) out of the following: **Cations :** NH_4^+ , Pb^{2+}, Bi^{3+}, Cu^{2+}, Cd^{2+}, Fe^{3+}, Al^{3+}, Co^{2+}, Ni^{2+}, Mn^{2+}, Zn^{2+}, Ba^{2+}, Sr^{2+}, Ca^{2+}, Na^+ **Anions :** CO_3^{2-} , S^{2-}, SO_3^{2-}, NO_2^- , CH_3COO^-, Cl^- , Br^-, I^- , NO_3^-, SO_4^{2-} (Spot tests may be carried out wherever feasible) **B. Acid-Base Titrations** • Standardization of sodium hydroxide by oxalic acid solution. • Determination of strength of HCl solution using sodium hydroxide as intermediate. • Estimation of carbonate and hydroxide present together in mixture. • Estimation of carbonate and bicarbonate present together in a mixture. • Estimation of free alkali present in different soaps/detergents	10

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Part A: Introduction

Program: Certificate Course		Class: B. A. / B.Sc. Part I	Year: 2022	Session:2022-2023
		Paper – MATH- 1T		
1	Course Code			
2	Course Title	Calculus		
3	Course Type	Theory		
4	Pre-requisite (if any)	No		
5	Course Learning Outcome (CLO)	This Course will enable the students to: • Calculate the limit and examine the continuity and understand the geometrical interpretation of differentiability. • Understand the consequences of various mean value theorems. • Draw curves in cartesian and polar coordinate systems. • Understand conceptual variations while advancing from one variable to severalvariables in calculus. • Inter-relationship amongst the line integral, double and triple integral formulations. • Realize importance of Green, Gauss and Stokes' theorems in other branches ofmathematics.		
6	Credit Value	4		
7	Total Marks	Maximum Marks : 50		Minimum Passing Marks : .....

Part B: Content of the Course
Total Periods: 60

Unit	Topics	No. of Periods
I	**Sequences, Continuity and Differentiability:** Notion of convergence of sequences and series of real numbers, $\epsilon-\delta$ definition of limit and continuity of a real valued function; Differentiability and its geometrical interpretation; Rolle's theorem, Lagrange's mean value theorem, Cauchy's mean value theorem and their geometrical interpretations, Darboux's theorem.	12
II	**Expansion of Functions:** Successive differentiation and Leibnitz theorem, Maclaurin's and Taylor's theorems for expansion of a function, Taylor's theorem in finite form with Lagrange, Cauchy and Roche–Schlömilch forms of remainder.	12
III	**Curvature, Asymptotes and Curve Tracing:** Curvature; Asymptotes of general algebraic curves, parallel asymptotes, Asymptotes parallel to axes; symmetry, concavity and convexity, points of inflexion, Tangents at origin, Multiple points, Position and nature of double points; Tracing of	12

Program: Certificate Course		Class: B. A. / B.Sc. Part I	Year: 2022	Session:2022-2023
1	Course Code	Paper – MATH-2T		
2	Course Title	Algebra		
3	Course Type	Theory		
4	Pre-requisite (if any)	No		
5	Course Learning Outcome (CLO)	**This Course will enable the students to:** • Employ De Moivre's theorem in a number of applications to solve numerical problems. • Learn about the fundamental concepts of groups, subgroups, normal subgroups, isomorphism theorems, cyclic and permutation groups. • Recognize consistent and inconsistent systems of linear equations by the row echelon form of the augmented matrix, using rank. • Find eigen values and corresponding eigen vectors for a square matrix. • Understand real vector spaces, subspaces, basis, dimension and their properties.		
6	Credit Value	4		
7	Total Marks	Maximum Marks : 50		Minimum Passing Marks : ….

Unit	Topics	No. of Periods
I	**Set Theory and Theory of Equations:** Sets, Relations, Equivalence relations, Equivalence classes; Finite, countable and uncountable sets; The division algorithm, Divisibility and the Euclidean algorithm, Modular arithmetic and basic properties of congruence's; Elementary theorems on the roots of polynomial equations, Imaginary roots, The fundamental theorem of algebra (statement only); The nth roots of unity, De Moivre's theorem for integer and rational indices and its applications.	12
II	**Groups, Subgroups, Normal Subgroups and Isomorphism Theorems :** Definition and properties of a group, Abelian groups, Examples of groups including D_n (dihedral groups), Q_8	12

Part A: Introduction

	Program: **Certificate Course**	Class: **B.A./ B.Sc. I Year**	Year: **2022**	Session: **2022-2023**
1	Course Code		**MATH-1P (I)**	
2	Course Title	I - Lab 01 - Calculus and Algebra		
3	Course Type	**Practical**		
4	Pre-requisite (if any)	No		
5	Course Learning Outcomes (CLO)	At the end of course, Students will be able to • Learn Free and Open Source Software (FOSS) tools for computer programming • Solve problems on Calculus and Algebra theories studied in Mathematics Paper 1 and 2 by using FOSS softwares. • Acquire knowledge of applications of Calculus and Algebra through FOSS.		
6	Credit Value	2		
7	Total Marks	Max. Marks: 50		Min Passing Marks : 17

Part B: Content of the Course

Total Periods: 30

Tentative Practical List	Mathematics practical with Free and Open Source Software (FOSS) tools for computer programs, such as GeoGebra/Maxima/Scilab/ Octave /Python/R. **Course Objectives:** • To learn Free and Open Source Software (FOSS) tools for computer programming • Acquire knowledge of applications of algebra and calculus through FOSS **List of Practicals:** (At least 15 practicals) • Programs to illustrate left hand and right hand limits for discontinuous functions. • Program to illustrate continuity of a function • Program to illustrate differentiability of a function • Program to verify Rolle's theorem • Program to verify Lagrange's theorem • Programs to verify Cauchy's mean value theorem and finding Taylor's theorem for a given function. • Program to illustrate nth derivative without Leibnitz rule.

Part A: Introduction

Program: **Certificate Course**		Class: **B.A./B.Sc. I Year**	Year: **2022**	Session: **2022-2023**
1	Course Code		**MATH-1P (II)**	
2	Course Title	II - Project 01 - History of Mathematician		
3	Course Type	**Project**		
4	Pre-requisite (if any)	NIL		
5	Course Learning Outcomes (CLO)	Studying history of mathematicians help students: • Develop a deeper understanding of the mathematics they hare already studied by seeing how it was developed over time and in various places. • Know the rich intellectual heritage of the country. • Develop an appreciation of mathematics and build positive attitude towards mathematics increasing student's motivation decreasing anxiety related the subject. • To acquire knowledge about development of mathematics in ancient, medieval and modern period of history. 2		
6	Credit Value	Max. Marks: 50		Min Passing Marks : 17
7	Total Marks			

Part B: Content of the Course

Total Periods: 30

Project List	**Course Objectives:** An elective course designed to acquire special / advance knowledge, such as supplement study / support study to a project work and a candidate will study such a course on his own with an advisory support a teacher / faculty member. **Project** Contributions and biographies of Indian Mathematicians- Bodhayan, Apasthambh, Katyayan and Mahaveeracharya, Brahmagupta, and Bhaskaracharya in special context of Leelavati and contributions of mathematicians involved in context of the paper of calculus and algebra. (10 Mathematicians)

Part A: Introduction

Program: **Certificate Course**		Class: **B.Sc.**	Year: **First**	Session: **2022-2023**
1	Course Code		PHY – 1T	
2	Course Title		**MECHANICS**	
3	Course Type		**Theory**	
4	Pre-requisite (if any)		No	
5	Course Learning Outcomes (CLO)	**After completion of the course students will be able to:** • Get knowledge about the vectors and differential equations used in physics. • Get an idea of different types of motions and conservation laws. • Get an idea about rotational motion and various properties of matter like elasticity and viscosity. • Understand various types of oscillatory motion and GPS system. • Get an idea about Frame of reference and special theory of relativity. • Solve numerical problems based on entire syllabus.			
6	**Credit Value**		**Theory : 4**	
7	**Total Marks**	**Max. Marks: 50**		**Min Passing Marks : 17**

Part B: Content of the Course

Total Periods: 60

Unit	Topic	Number of Periods
I	**Vectors**: Vector algebra, Derivatives of a vector with respect to a parameter, Scalar and vector products of two, three and four vectors, Gradient, divergence and curl of vectors fields, Polar and Axial vectors. **Ordinary Differential Equations:** 1st order homogeneous differential equations, exact and non-exact differential equations, 2nd order homogeneous and nonhomogeneous differential equations with constant coefficients (Operator Method Only).	12
II	**Laws of Motion:** Review of Newton's Laws of motion. Dynamics of a system of particles, Concept of Centre of Mass, determination of center of mass for discrete and continuous systems having cylindrical and spherical symmetry. **Work and Energy:** Motion of rocket, Work-Energy theorem for conservative forces, Force as a gradient of Potential Energy, Conservation of momentum	12

Part A: Introduction

Program: **Certificate Course**		Class: **B.Sc.**	Year: **First**	Session: **2022-2023**
1	Course Code		PHY – 2T	
2	Course Title		**ELECTRICITY AND MAGNETISM**	
3	Course Type		**Theory**	
4	Pre-requisite (if any)		No	
5	Course Learning Outcomes (CLO)	**After completion of the course students will be able to –** • Get knowledge about the vectors analysis and able to apply in electrostatic and Magnetostatics. • Get idea about electric fields, force and potential. • Get idea about Dielectric and Electric currents and also the application in AC circuits. • Get idea about Magnetic properties of material. • To get idea about Electromagnetic Induction and Maxwell's equation and Electromagnetic wave propagation. • Solve numerical problems based on entire syllabus.			
6	**Credit Value**		**Theory : 4**	
7	**Total Marks**	**Max. Marks: 50**		**Min Passing Marks : 17**

Part B: Content of the Course

Total Periods: 60

Unit	Topic	Number of Periods
I	**Vector Analysis**: Vector Integration, Line, surface and volume integrals of Vector fields, Gauss-divergence theorem and Stoke's theorem of vectors and its application in electrostatics and magnetostatics.	12
II	**Electrostatics:** Electrostatic Field, electric flux, Gauss's theorem of electrostatics, Applications of Gauss theorem- Electric field due to point charge, infinite line of charge, uniformly charged spherical shell and solid sphere, plane charged sheet, charged conductor. Electric potential as line integral of electric field, potential due to a point charge, electric dipole, uniformly charged spherical shell and solid sphere, Calculation of electric field from potential, Capacitance of an isolated spherical conductor, Parallel plate, spherical and cylindrical condenser, Energy per unit volume in electrostatic field.	12

Part A: Introduction

		Program: **Certificate Course**	Class: **B.Sc.**	Year: **First**	Session: **2022-2023**
1	Course Code			PHY 1P	
2	Course Title			LAB 1: Mechanics, Electricity and Magnetism	
3	Course Type			Practical	
4	Pre-requisite (if any)			NO	
5	Course Learning Outcomes (CLO)	**Expected Outcomes:** • To get knowledge about the use of various measuring instruments. • To get understanding about the simple harmonic motion, elasticity, surface tension and viscosity. • Students will be able to understand applications of basic principle of Electricity and Magnetism theory in real world.			
6	Credit Value			Practical : 2	
7	Total Marks	Max. Marks: 50		Min Passing Marks : 17	

Part B: Content of the Course

Total Lectures: 30

Tentative Practical List	At least 14 experiments from the following: 1. Measurements of length (or diameter) using vernier caliper, screw gauge and travelling microscope. 2. To study the random error in observations.

Part A: Introduction

Program:Certificate Course		Class:B.Sc. 1ˢᵗYear	Year:2022	Session:2022-2023
1	Course Code	ZOOL-1T		
2	Course Title	Animal Diversity: Non-Chordata and Chordata, Comparative Anatomy and Physiology of Non-chordates		
3	Course Type	Theory		
4	Pre-requisite (if any)	No		
5	Course Learning Outcomes (CLO)	Upon completion of the course students should be able to : • Learn about the importance of systemic,taxonomy and phylogeny to get a concrete idea of evolution of non-chordate phyla. • Understand the various morphological, anatomical structures and functions ofanimals of different phyla. • Get the knowledge about economic,ecological and medical significance ofvarious animals in human welfare. • Understand the important parasites andtheir control measures. • Comparison of the anatomy and physiology of the different taxa of non-chordates.		
6	Credit Value	4		
7	Total Marks	Max. Marks: 50	Min Passing Marks : 17	

Part B: Content of the Course

Total Lectures: 60

Unit	Topics	No. of Lectures
I	**Taxonomy, Protozoa, Porifera** **Taxonomy-** Elementary knowledge of Zoological Nomenclature and International Code. Classification of Animal Kingdom upto Phylum of acoelomate and coelomate non-chordates according to Parker and Haswell7ᵗʰ edition. **Protozoa-** Phylum Protozoa: General characters of the phylum and classification up to order with characters and suitable examples. Structure, life history and pathogenicity of malaria parasite *(Plasmodium vivax)*. Protozoa and disease. **Porifera-** Phylum Porifera: General characters of the phylum and classification up to order with characters and suitable examples. Type study of Sycon.	12
II	**Coelenterata, Platyhelminthes, Nemathelminthes :** **Coelenterata-** PhylumCoelenterata: General characters of the phylum and classification up to order with characters and suitable examples. Type Study of Obelia. **Platyhelminthes -** Phylum Platyhelminthes: General characters of the phylum and classification up to order with characters and suitable examples. Type Studyof Liverfluke. **Nemathelminthes-** PhylumNemathelminthes: General characters of the phylum and classification up to order with characters and suitable examples. Pathogenic nematodes and diseases.	12
III	**Annelida, Arthropoda, Mollusca :** **Annelida-** Phylum Annelida: General Characters of the phylum and classification up to order with characters and suitable examples. Types study of Earthworm *(Pheretima)*. **Arthropoda -** Phylum Arthropoda: General Characters of the phylum and classification up to order with characters and suitable examples. Type study of Prawn. Insects as a vector of human disease. **Mollusca -** Phylum Mollusca: General characters of the phylum and classification up to order with characters and suitable examples. Type study of *Pila*.	12

A.KRJahn
31.5.2022

Part A: Introduction

Program: **Certificate Course**		Class: **B.Sc. I Year**	Year: **2022**	Session:**2022-2023**
1	Course Code	ZOOL- 2T		
2	Course Title	Cell Biology, Histology and Comparative Anatomy & Physiology of Chordates		
3	Course Type	Theory		
4	Pre-requisite (if any)	To study this course, a student must have/had the subject Biology in class 12th.		
5	Course Learning Outcomes (CLO)	At the end of this course, the students will be able : - Understand the basic structure, functioning of the cell and cell organelles and understand the intricate cellular mechanisms involved. - Understand the tissues, how tissues are produced from cells in a normal course and about any malfunctioning which may lead to benign or malignant tumor. - Develop an understanding of the evolution of vertebrates thus integrating structure, function and development. - Understand the morphological, anatomical and physiological adaptation in diverse habitats. 5. Develop an understanding of the evolution of vertebrates thus integrating structure, function and development.		
6	Credit Value	Theory : 4		
7	Total Marks	Max. Marks: 50	Min Passing Marks : 17	

Part B: Content of the Course

Total Lecturer: 60

Unit	Topics	No. of Lectures
I	**Prokaryotic and Eukaryotic cells :** General structure of prokaryotes, bacteria, archaea and eukaryotes. Ultra structure and function of endoplasmic reticulum, ribosomes, Golgi apparatus, lysosome, Mitochondria, nuclear apparatus. **Cell membrane and transport mechanism :** Structure, composition, models and function. Fluid mosaic model Junctional complexes, membrane receptor modifications : microvilli, desmosomes and plasmodesmata.	12
II	**Cell cycle, cell signaling and cell culturing :** Cell cycle, cell division – mitosis and meiosis. Cell division check points and their regulation. Role of growth factors. Programmed cell death (Apoptosis). **Cell regulation and cell signaling :** Signaling molecules and their receptors. Functions of cell surface receptors. Regulation of signaling pathways. **Cell culture :** Types of cell culture – monolayer and suspension culture. Types of culture media. Basic characteristics of tissue culture media. Tissue culture and engineering.	12
III	**Structure and functional significance of animal tissues :** Introduction to tissues. Epithelial tissue: types, structure and characteristics. Exocrine and endocrine glands: type and structure. Structure and function of loose, dense and adipose tissue. Muscular tissue: Ultra structure of smooth, skeletal and cardiac muscles. Muscle contraction. Membrane of the brain and spinal cord.	11
IV	**Structure and function of integument, skeletal, digestive, circulatory system :** **Integument :** Structure of integument from fish to mammals. Function of integument. Epidermal and dermal derivatives of integument and their functional significance. **Skeletal system :** Comparative account of pelvic and pectoral girdles from fishes (cartilaginous and bony) to mammals. **Digestive system :** Dentition in mammals. Comparative study of alimentary canal and digestive glands from fish to mammal. Physiology of digestion in mammal.	13

Dr.K.R.Sahu
31.5.2022

Part A: Introduction

Program: **Certificate Course**		Class: **B.Sc. I Year**	Year: 2022	Session:2022-2023
1	Course Code	ZOOL-1P		
2	Course Title	Lab Course - I		
3	Course Type	Practical		
4	Pre-requisite (if any)	No		
5	Course Learning Outcomes (CLO)	After completion of practical work the outcome will be : • Able to know animal diversity in the form of museum/slide for invertebrate and invertebrates. • Capable to enumerate biology of invertebrates. • Capable to explore anatomy of animas. • Able to understand cytological, histological and osteological configuration for animal life. • Capable to explain hematology of animal system.		
6	Credit Value	2		
7	Total Marks	Max. Marks: 50	Min Passing Marks : 17	

Part B: Content of the Course

Total classes: 30

Content	No. of classes
Tentative list of practical/exercise :. The practical's work will be based on theory syllabus and the students will be required to show the knowledge of the following – 1. Study of museum specimens representing to invertebrate phyla. 2. Study of permanent slides : Paramecium, Euglena, T. S. Sycon, Sponge Spicules, Sponge gemmule, Obelia colony, Obelia medusa, Ephyra larva, Fasciola larval forms (miracidium, Radia, Cercaria, Metacercaria), Trochophore larva, Zoea larva, Bipinnaria larva. 3. Dissection/ demonstration/ clay model of – a) Phretima : Digestive system, Reproductive system, Nervous system b) Palaemon : Appendages, Nervous system c) Periplaneta : Mouth parts, Digestive system d) Pila : Nervous system 4. Exercise based on cytology : squash preparation from onion root tip and study of cell division. 5. Study of museum specimens representing the chordata from cyclostomes to mammals. 6. Study of permanent slides of chordates – Fish skin, scales, V. S. Skin of frog, reptile, bird, mammal, T.S. liver, pancreas, testes, ovary of frog and mammal. 7. Osteology : Study of girdles of amphibian, reptile, bird and mammal. 8. Temporary mounting : a) Palaemon : Statocyst b) Pila : Ctenidium, osphradium c) Pheretima : Septal nephridia d) Fish scale : Placoid, Cycloid, Ctenoid 9. Exercise based on blood : blood group, blood pressure measure 10. Field visit report : Photography & identification of any five local invertebrate or vertebrate fauna.	30

A.K.Sahu
31-5-2022