पं. रविशंकर शुक्ल विश्वविद्यालय, रायपुर (छ.ग.)

दूरभाष : 0771–2262802 (अकादमिक विभाग), 0771–2262540 (कुलसचिव कार्यालय)

क्रमांक 538/अका./2019 रायपुर, दिनांक 22/06/2019

प्रति,

प्राचार्य/प्राचार्या
संबद्ध समस्त महाविद्यालय
पं. रविशंकर शुक्ल विश्वविद्यालय
रायुपर (छ.ग.)

विषय :– **स्नातक स्तर भाग–एक के पाठ्यक्रम बाबत्।**

संदर्भ :– संयुक्त संचालक, उच्च शिक्षा का पत्र क्रमांक 2456/315/आउशि/सम/2019, दिनांक 16.05.2019

महोदय/महोदया,

विषयांतर्गत् संदर्भित पत्र के माध्यम से प्राप्त स्नातक स्तर भाग–एक के निम्नलिखित कक्षा/विषयों के परिवर्तित/संशोधित पाठ्यक्रम शिक्षा सत्र् 2019–20 से प्रभावशील किया जाता है–

1. **बी.ए.** – आधार पाठ्यक्रम–हिन्दी भाषा, राजनीति, अर्थशास्त्र, संगीत, दर्शनशास्त्र, मानवविज्ञान, गणित, इतिहास, हिन्दी साहित्य, समाजशास्त्र, भूगोल, मनोविज्ञान, संस्कृत, सांख्यिकी, प्राचीन भारतीय इतिहास।
2. **बी.कॉम.** – आधार पाठ्यक्रम–हिन्दी भाषा, वाणिज्य।
3. **बी.एस.सी.** – जैविकी, मानवविज्ञान, बायोटेक्नोलॉजी, कम्प्यूटर साइंस, गणित, भौतिकशास्त्र, प्राणीशास्त्र, सूक्ष्मजीव विज्ञान, वनस्पतिशास्त्र, भूविज्ञान, इलेक्ट्रॉनिकी, रसायन, सांख्यिकी, भूगोल, आधार पाठ्यक्रम–हिन्दी भाषा।
4. **बी.एस.सी. (गृह विज्ञान)** – आधार पाठ्यक्रम–हिन्दी भाषा, एवं गृहविज्ञान।

उपरोक्त विषयों को शिक्षा सत्र् 2019–20 से संशोधित रूप में स्नातक स्तर भाग–एक के लिए प्रभावशील किया जाता है, स्नातक स्तर भाग–दो एवं तीन के पाठ्यक्रम यथावत् रहेंगे।

अतः आपसे अनुरोध है कि पाठ्यक्रम परिवर्तन/संशोधन से महाविद्यालय के शिक्षकों एवं छात्र–छात्राओं को अवगत कराने का कष्ट करेंगे।

संलग्न :– उपरोक्तानुसार।

21.06.19

विशेष कर्तव्यस्थ अधिकारी (अका.)

क्रमशः 2

पं. रविशंकर शुक्ल विश्वविद्यालय, रायपुर (छ.ग.)

दूरभाष : 0771–2262802 (अकादमिक विभाग), 0771–2262540 (कुलसचिव कार्यालय)

पृ. क्र. 539 /अका./2019 रायपुर, दिनांक 22/06/2019

प्रतिलिपि :–

1. संयुक्त संचालक, उच्च शिक्षा को पत्र क्रमांक 2456/315/आउशि/सम/2019, दिनांक 16.05.2019 के परिपेक्ष्य में सूचनार्थ।
2. उपकुलसचिव परीक्षा, सहायक कुलसचिव गोपनीय विभाग,
3. कुलपति जी के सचिव/कुलसचिव के निज सहायक, पं. रविशंकर शुक्ल विश्वविद्यालय, रायपुर को सूचनार्थ।

वरिष्ठ अधीक्षक (अका.)

B.Sc.–II (BOTANY) PAPER-I

(PLANT TAXONOMY, ECONOMIC BOTANY, PLANT ANATOMY AND EMBRYOLOGY)

UNIT-I

Bentham and Hooker system of classification.Binomial Nomenclature, International Code of Nomenclature for Algae, Fungi, and plants (IUCN), Typification, numerical Taxonomy and chemotaxonomy. Preservation of Plant material and Herbarium techniques.Important botanical gardens and herbaria of India, Kew Botanical garden, England.

UNIT-II

Systematic position, distinguishing characters and economic importance of the following families, Ranunculaceae, Magnoliaceae, Brassicaeae, Rosaceae, Papaveraceae, Caryophyllaceae, Rutaceae, Cucurbitaceae, Apiaceae, Rubiaceae, Apocynaceae, Asclepiadaceae, Solanaceae, Malvaceae, Convolvulaceae, Orchidaceae, Acanthaceae, verbenaceae, Lamiaceae, Asteraceae, Fabaceae, Euphorbiaceae, Poaceae and Liliaceae.

UNIT-III

Economic Botany: Botanical name, family, part used and uses of the following economically important plants, fiber yielding plants; Cotton, jute, sun, hemp, coir.Timber yielding plants: Sal, Teak, Shisham and Pine.Medicinal plants: Kalmegh, Ashwangandha, Ghritkumari, Giloy, Brahmi, sarpgandha, ---of medicinal plants of C.G. Food plants: Pearl millet, Buck of wheat, Sorghum, Soyabean, gram, Ground nut, Sugarcane and Potato.Fruit plants: Pear, Peach, Litchi. Spices: Cinnamon, Turmeric, Ginger, Asafoetida and Cumin. Beverages : Tea, Coffee Rubber Cultivation of important flowers: Chrysanthemum, Dahelia, Biodiesel plants Jatropha, Pongamia Ethnobotany in context of Chhattisgarh.

UNIT-IV

Plant Anatomy: Root and shoot apical meristems theories of root and shoot apex organization, permanent tissues, anatomy of root, stem and leaf of dicot and monocot, secondary growth in root and stem, Anatomical anomalies in the primary structure of stems (Nyctanthes, Boerhaavia, Casuarina), Anamolous secondary growth in Dracaena, Bignonia, Laptadenia.

UNIT-V

Embryology: Flower as a reproductive organ, anther, microsporogenesis, types of ovules, megasporogenesis, development of male and female gametophyte, pollination, mechanisms, self incompatibility, fertilization, endosperm, embryo, polyembryonoy, apomixes and parthenocarpy.

Books Recommended:

Singh, Pandey,Jain. ***Diversity and Systematics of Seed Plants***, Rastogi Publications Merrut

Sharma OP, ***Plant Taxonomy,*** Tata Mc Graw Hill, New Delhi

Pandey BP, ***Taxonomy of Angiosperms,*** S. Chand Publishing, New Delhi

Pandey, BP, ***Plant Anatomy,*** S.Chand Publishing, New Delhi

Pandey, BP, ***Economic Botany,*** S.Chand Publishing, New Delhi

Bhojwani, SS and Bhatanagar SP, ***Embryology of Angiosperm***, Vikas Publication House, New Delhi

Singh, Pandey, Jain, ***Embryology of Angiosperms***, Rastogi Publication, Meerut

Sharma, V, Alum, A. ***Ethnobotany***, Rastogi Publications, Meerut

Tayal, MS ***Plant Anatomy***, Rastogi Publication, Meerut

(Dr. J.N. Verma) (Dr.Rekha Pimpalgaonkar) (Dr.Ranjana Shristava)

Proff. & Head Proff. & Head Proff. & Head

Govt. D.B. Girls PG College Govt. N PG Science College Govt. VYTPG Science College

Raipur, (C.G.) Raipur, (C.G.) Raipur, (C.G.)

(Mrs. Sanchal Moghe) (Mr. Shivakant Mishra) (Mr Sudheer Tiwari)

Govt. Bilasa Girls College, Bilaspur

PRACTICAL SCHEME

TIME: 4 Hrs. **M.M. : 50**

1.	Anatomy	08
2.	Economic Botany	04
3.	Physiology	08
4.	Ecology	10
5.	Spotting	10
6.	Viva-Voce	05
7.	Project Work/ Field Study	10

(Dr. J.N. Verma
Proff. & Head
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Raipur, (C.G.)

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Govt. N PG Science College
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(Mrs. Sanchal Moghe)
Govt. Bilasa Girls College, Bilaspur

(Mr. Shivakant Mishra)

(Mr Sudheer Tiwari)

Meeting of Central Board of Studies(Chemistry): 18th June, 2018

Subject/ Faculty/ Name of Question Paper .....Chemistry/Science.....

Existing Syllabus	New Modified Syllabus	Justification of New Modified Syllabus
B.Sc. PART-II **PAPER I (Inorganic Chem)**		
Unit-I **First transition series**	All d-block elements merged together. Now the title is 'Chemistry of Transition Series Elements'. In earlier syllabus this was divided in Unit-I & II.	Better composition
Unit-II **Second and third transition series**	Splitted to two parts. Part A- 'Oxidation and Reduction' Part B- 'Coordination Compounds'	Better composition
Unit-III **A. Oxidation and reduction** **B. Coordination Compounds**	Both moved to Unit II. A new topic 'Coordination Chemistry' is placed.	Better composition and upgradation
Unit-IV **A. Lanthenides** **B. Actinides**	Same as existing	
Unit-V **A. Acid and Bases** **B. Non-aqueous Solvents**	Same as existing. With addition of HF, H_2SO_4 , Ionic liquids in Part B.	Modification/ upgradation
Laboratory Course **Calibration, standard solution** **Quantitative analysis by volumetric method** **Colorimetry, solvent extraction, ion exchange**	Changed to Advanced semimicro analysis Volumetric analysis Chromatographic separation of ions	Modification/ upgradation To make the syllabus more appropriate at this level

(Signature of members of Central Board of Studies)

18/6/2018

18.6.18

Subject/ Faculty/ Name of Question Paper .....

B.Sc. PART-II

PAPER-II (Organic Chem)

Existing Syllabus	New Modified Syllabus	Justification of New Modified Syllabus
Unit-I **Alcohols** **Phenols** **Epoxides**	Changed to 'Organic Halides'. 'Alcohols and Phenols' moved to Unit-II. 'Epoxides' deleted	Important topic Reappropriation Less important topic
Unit-II **Aldehydes and Ketones**	Changed to 'Alcohols & Phenols' with inclusion of primary alcohols too.	Reappropriation and upgradation
Unit-III **A. Carboxylic Acids** **B. Substituted Carb. Acids** **C. Carboxylic & derivatives**	Changed to 'Aldehydes & Ketones' with little change in topics	Reappropriation
Unit-IV **Organic Compounds of Nitrogen**	Changed to 'A. Carboxylic Acids' and 'B. Carboxylic Acid Derivatives	Better composition
Unit-V **Heterocyclic Compounds**	Changed to 'Organic Compounds of Nitrogen'	Better composition
Laboratory Course **A. Thin layer chromatography** **B. Paper Chromatography: Ascending & Circular** **Qualitative Analysis of organic compounds**	Changed to: Detection of elements (X,N,S) Qualitative analysis of organic compounds (with enhanced list of compounds) Synthesis of organic compounds containing important and diffrent functional groups.	To develop synthetic skills and upgradation

(Signature of members of Central Board of Studies)

18.6.18

18.6.18

18/6/18

18/6/18

Revised syllabus

SOCIOLOGY 2018-2019

B.A. PART-I

Paper – I

INTRODUCTION TO SOCIOLOGY (Paper Code - 0115)

UNIT-I **Sociology** : Meaning, Nature, scope, Subject matter and significance.
Basic concepts : Society, Community, institution, Association, group, Status and role.

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

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

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

UNIT-V **Social System and process:** Social System- meaning, characteristics and elements.
Social process- Meaning, elements, characteristics and types.

ESSENTIAL READINGS :-

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., Introductory Sociology, Madras Maomillan India 1988.
4 Johnson Harry, M., Sociology of systematic Introduction New Delhi Allied Publishers 1995.

सपना
11.06.18

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11/06/2018

11.06.2018

11/6/2018
Head,
S.O.S. in Sociology & Social Work,
Pt. Ravishankar Shukla University,
Raipur. (C.G.)

11/6/18

11/6/18

प्रपत्र –1

कक्षा : बी.ए. प्रथम वर्ष,

संकाय : सामाजिक विज्ञान

विषय : समाजशास्त्र

प्रश्न–पत्र : First **(Paper code 0115 : Introduction to Sociology)**

वर्तमान पाठ्यक्रम	नवीन संशोधित पाठ्यक्रम	नवीन संशोधित पाठ्यक्रम का औचित्य
Introduction to Sociology	**Introduction to Sociology**	केन्द्रीय अध्ययन मण्डल के अध्यक्ष एवं सदस्यों द्वारा आशिक संशोधन किया गया है, जो निम्नानुसार है:– 1. विषय में प्रथम प्रश्न–पत्र के शीर्षक को ध्यान में रखते हुए आंशिक संशोधन किया गया। 2. बी.ए. प्रथम वर्ष के विद्यार्थियों के बौद्विक क्षमत को ध्यान रखते हुए आंशिक संशोधन का निर्णय लिया गया। 3. इस पाठ्यक्रम के माध्यम से विद्यार्थियों को विषय के आधारभूत जानाकारी से जानकारी से अवगत कराने हेतु आंशिक संशोधन किया गया है।

11.06.18

11.06.2018

11/6/2018

Head,
S.O.S. in Sociology & Social Work,
Pt. Ravishankar Shukla University,
Raipur (C.G.)

Revised syllabus

SOCIOLOGY 2018-2019

B.A. PART-I

Paper –II

CONTEMPORARY INDIAN SOCIETY (Paper Code-0116)

UNIT-I **Classical View about Indian Society:** Verna, Asharam, 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 **Social Problems:**

Surrogate Motherhood, Live in Relationship, Regionalism, Communalism, Corruption, Youth unrest.

ESSENTIAL READINGS :-

1 Dube, S. C. 1995. Society in India, New Delhi: National Book Trust.

2 Mandelbaum, D.G. 1970. Society in India, Bombay: Poular Prakashan.

3 Shriniwas, M.N. 1973. Social Change in Modern India, California: University of California Press.

4 Shriniwas, M.N. 1990. Social Change Structure, New Delhi: Hindustan Publishing Corporation.

5 Uberoi Patricia, 1993. Family and Marriage In India, New Delhi: Oxford University Press.

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11/6/2018
Head,
S.O.S. in Sociology & Social
Pt. Ravishankar Shukla Univ
Raipur. (C.G.)

11/6/18

	and, He-Ne and Semiconductor lasers. Application of lasers : Application in communication, Holography and non linear optics. (Polarization P including higher order terms in E and generation of harmonics).	communication, Holography and Basics of non linear optics and Generation of Harmonic.	

TEXT AND REFERENCE BOOKS :

1. A.K. Ghatak, 'Physical Optics'
2. D.P. Khandelwal, Optical and Atomic Physics' (Himalaya Publishing House, Bombay, 1988)
3. K.D. Moltev ; 'Optics' (Oxford University Press)
4. Sears : 'Optics'
5. Jenkins and White : 'Fundamental of Optics' (McGraw-Hill)
6. B.B. Laud : Lasers and Non-linear Optics (Wiley Eastern 1985)
7. Smith and Thomson : 'Optics' (John Wiley and Sons)
8. Berkely Physics Courses : Vol.-III, 'Waves and Oscilations'
9. I.G. Main, 'Vibratiens and Waves' (Cambridge University Press)
10. H.J. Pain : 'The Physics of Vibrations and Waves' (MacMillan 1975)
11. Text Book of Optics : B.K. Mathur
12. B.Sc. (Part III) Physics : Editor : B.P. Chandra, M.P. Hindi Granth Academy.
13. F. Smith and J.H. Thomson, Manchester Physics series : optics (English language boosoeiety and Jehu wiley, 1577)
14. Bern and Woif : 'Opties'.
15. Physical Optics: B. K. Mathur and T. P. Pandya.
16. A textbook of Optics: N. Subrahmanyam, Brijlal and M. N. Avadhanulu.
17. Geometrical and Physical Optics: Longhurst.
18. Introduction to Modern Optics: G. R. Fowels.
19. Optics: P. K. Srivastav

PHYSICS

OBJECTIVES OF THE COURSE

The undergraduate training in physics is aimed at providing the necessary inputs so as to set forth the task of bringing about new and innovative ideas/concepts so that the formulated model curricula in physics becomes in tune with the changing scenario and incorporate new and rapid advancements and multi disciplinary skills, societal relevance, global interface, self sustaining and supportive learning.

It is desired that undergraduate i.e. B.Sc. level besides grasping the basic concepts of physics should in addition have broader vision. Therefore, they should be exposed to societal interface of physics and role of physics in the development of technologies.

EXAMINATION SCHEME:

1. There shall be 2 theory papers of 3 hours duration each and one practical paper of 4 hours duration. Each paper shall carry 50 marks.
2. Numerical problems of at least 30% will compulsorily be asked in each theory paper.
3. In practical paper, each student has to perform two experiments one from each groups as listed in the list of experiments.
4. Practical examination will be of 4 hours duration- one experiment to be completed in 2 hours.

   The distribution practical marks as follows:

Experiment	:	15+15=30
Viva voce	:	10
Internal assessment	:	10
5. The external examiner should ensure that at least 16 experiments are in working order at the time of examination and submit a certificate to this effect.

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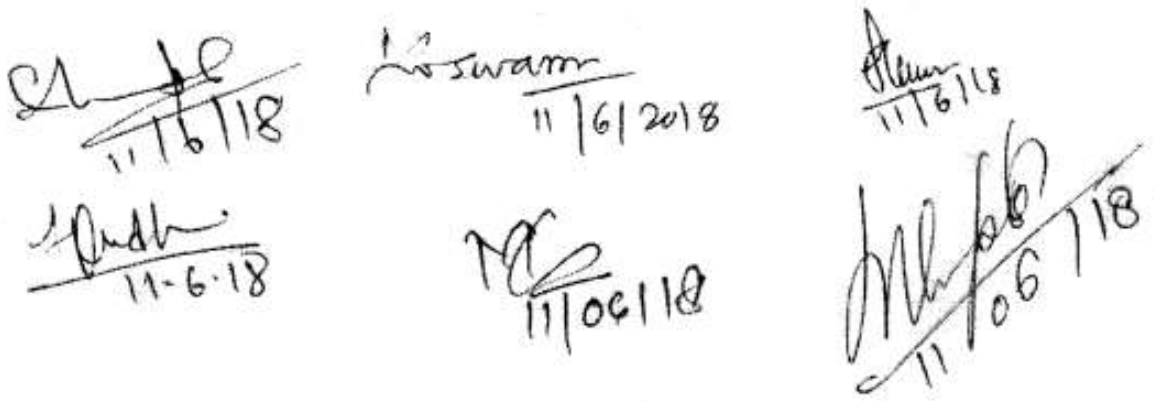
Transition to quantum statistics: 'h' as a natural constant and its implications, cases of particle in a one-dimensional box and one-dimensional harmonic oscillator.

Unit-5 Indistinguishability of particles and its consequences, Bose-Einstein & Fermi-Dirac conditions, Concept of partition function, Derivation of Maxwell-Boltzmann, Bose-Einstein and Fermi-Dirac Statistics, Limits of B-E and F-D statistics to M-B statistics. Application of B-E statistics to black body radiation, Application of F-D statistics to free electrons in a metal.

TEXT AND REFERENCE BOOKS:

1. B.B. Laud, "Introduction to Statistical Mechanics" (Mcmillan 1981)
2. F. Reif : "Statistical Physics" (Mcgraw-Hill, 1998).
3. K, Haung : "Statatistical Physics" (Wiley Eastern, 1988).
4. Thermal and statistical Physics: R.K. Singh, Y.M. Gupta and S. Sivraman.
5. Statistical Physics: Berkeley Physics Course, Vol. 5
6. Physics (Part-2): Editor, Prof. B.P. Chandra, M.P. Hindi Granth Academy.
7. Heat and Thermodynamics: K.W. Zeemansky.
8. Thermal Physics: B.K. Agarwal.
9. Heat and Thermodynamics: Brij Lal and N. Subramanyam.
10. Heat and Thermodynamics: Dayal, Verma and Pandey.
11. A Treatise on Heat: M.N. Saha and B.N. Srivastava.



Polarized light and its mathematical representation, Production of polarized light by reflection, refraction and scattering. Polarization by double refraction and Huygen's theory, Nicol prism, Retardation plates, Production and analysis of circularly and elliptically polarized light. Optical activity and Fresnel's theory, Biquartz polarimeter.

Unit-5 Laser system: Basic properties of Lasers, coherence length and coherence time, spatial coherence of a source, Einstein's A and B coefficients, Spontaneous and induced emissions, conditions for laser action, population inversion, Types of Laser : Ruby and, He-Ne laser and. Applications of laser : Application in communication, Holography and Basics of non linear optics and Generation of Harmonic.

TEXT AND REFERENCE BOOKS:

1. A.K. Ghatak, 'Physical Optics'
2. D.P. Khandelwal, Optical and Atomic Physics' (Himalaya Publishing House, Bombay, 1988)
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15. Physical Optics: B. K. Mathur and T. P. Pandya.
16. A textbook of Optics: N. Subrahmanyam, Brijlal and M. N. Avadhanulu.
17. Geometrical and Physical Optics: Longhurst.
18. Introduction to Modern Optics: G. R. Fowels.
19. Optics: P. K. Srivastav.

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