



Office of the Principal
Govt. College Barpali, Dist- Korba (C.G.)

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govtcollegebarpali3107@gmail.com
Mob :- 8234062065 College Code No. 3107

Professional Ethics, Gender, Human Values, Environment and Sustainability as a part into the following Curriculum (for students)

SNo	Class	Subject	Topics	Link to Syllabus
1.	B.A./ B.Sc./ B.Com-I	Environment Studies	Environment Studies and Human Rights	B.A.-I (http://www.govtcollegebarpali.in/newsData/Report31.pdf) B.Sc. -I (http://www.govtcollegebarpali.in/newsData/Report37.pdf) B.Com-I (http://www.govtcollegebarpali.in/newsData/Report34.pdf)
2.	B.A. -I	Political Science	Human Rights	B.A.-I (http://www.govtcollegebarpali.in/newsData/Report31.pdf)
3.	B.A. -I	Sociology	Gender Sensitization	B.A.-I (http://www.govtcollegebarpali.in/newsData/Report31.pdf)
4.	B.A.-I	Geography	Human Adaptation to Environment	B.A.-I (http://www.govtcollegebarpali.in/newsData/Report31.pdf)
5.	B.A.-III	Geography	Resources amd Environment	B.A.-III http://www.govtcollegebarpali.in/newsData/Report33.pdf
6.	B.A.-III	Geography	Classification of Environment	B.A.-III http://www.govtcollegebarpali.in/newsData/Report33.pdf
7	B.Sc-III	zoology	Environment Impact Assessment	B.Sc-III http://www.govtcollegebarpali.in/newsData/Report39.pdf
8	B.Sc-III	Zoology	Environmental Biology	B.Sc-III http://www.govtcollegebarpali.in/newsData/Report39.pdf
9	B.Sc-III	Zoology	Environment and Sustainability, Conservation of Natural Resources	B.Sc-III http://www.govtcollegebarpali.in/newsData/Report39.pdf
10	B.Sc-III	Botany	Environment and Sustainability	B.Sc-III http://www.govtcollegebarpali.in/newsData/Report39.pdf

Principal
Govt College Barpali,
Distt. Korba (C.G.)

बिलासपुर विश्वविद्यालय, बिलासपुर (छ.ग.)

पुराना हाईकोर्ट भवन, बिलासपुर (छ.ग.) 495001,
फोन : 07752-220031, फैक्स 07752-260294, ई-मेल : bilaspuruniversity.2012@gmail.com,
वेबसाइट : www.bilaspuruniversity.ac.in

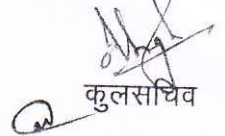
क्र. 1186 / अका. / 2014

बिलासपुर दिनांक 11/9/14

अधिसूचना

बिलासपुर विश्वविद्यालय से सम्बद्ध समस्त महाविद्यालय को सूचित किया जाता है कि केन्द्रीय अध्ययन मण्डल द्वारा अनुमोदित पर्यावरण अध्ययन के संशोधित पाठ्यक्रम "पर्यावरण अध्ययन व मानवाधिकार" स्नातक स्तर पर शिक्षा सत्र 2014-15 से प्रभावशील होगा। (अनुमोदित पाठ्यक्रम संलग्न)

आदेशानुसार,


कुलसचिव

पृ. क्रमांक 1187 / अका. / 2014

बिलासपुर, दिनांक 11/9/14

प्रतिलिपि:-

1. कुलपति के निज सहायक को माननीय कुलपति महोदय के सूचनार्थ प्रेषित।
2. परीक्षा नियंत्रक / उप-कुलसचिव (परीक्षा/गोपनीय) बिलासपुर विश्वविद्यालय, बिलासपुर को सूचनार्थ प्रेषित।
5. प्राचार्य, समस्त सम्बद्ध महाविद्यालय, को इस आशय के साथ प्रेषित की महाविद्यालय में केन्द्रीय अध्ययन मण्डल द्वारा अनुमोदित "पर्यावरण अध्ययन व मानवाधिकार" विषय का अंगीकृत पाठ्यक्रम अध्ययन-अध्यापन कराना सुनिश्चित करें।
6. संपादक, दैनिक को इस अनुरोध के साथ प्रेषित की कृपया उपरोक्त अधिसूचना को अपने लोकप्रिय दैनिक समाचार पत्र में छात्रहीन में प्रकाशित करने का कष्ट करें।


कुलसचिव

SYLLABUS FOR ENVIRONMENTAL STUDIES AND HUMAN RIGHTS FOR UNDER GRADUATE

'इन्वाहरमेंटल साईंसेस' के पाठ्यक्रम को स्नातक स्तर भाग-एक की कक्षाओं में विश्वविद्यालय अनुदान आयोग के निर्देशानुसार अनिवार्य रूप से शिक्षा सत्र 2003-2004 (परीक्षा 2004) से प्रभावशील किया गया है। स्वशासी महाविद्यालयों द्वारा भी अनिवार्य रूप से अंगीकृत किया जाएगा।

भाग 1, 2 एवं 3 में से किसी भी वर्ष में पर्यावरण प्रश्न -पत्र उत्तीर्ण करना अनिवार्य है। तभी उपाधि प्रदाय योग्य होगी।

पाठ्यक्रम 100 अंकों का होगा, जिसमें से 75 अंक सैद्धांतिक प्रश्नों पर होंगे एवं 25 अंक क्षेत्रीय कार्य (Field Work) पर्यावरण पर होंगे।

सैद्धांतिक प्रश्नों पर अंक -75 (सभी प्रश्न इकाई आधार पर रहेंगे जिसमें आंतरिक विकल्प रहेगा)

(अ) लघु प्रश्नोंत्तर - 25 अंक

(ब) निबंधात्मक - 50 अंक

Field Work - 25 अंकों का मूल्यांकन आंतरिक मूल्यांकन पद्धति से कर विश्वविद्यालय को प्रेषित किया जावेगा। अभिलेखों की प्रायोगिक उत्तर पुस्तिकाओं के समान संबंधित महाविद्यालयों द्वारा सुरक्षित रखेंगे।

उपरोक्त पाठ्यक्रम से संबंधित परीक्षा का आयोजन वार्षिक परीक्षा के साथ किया जाएगा।

पर्यावरण विज्ञान विषय अनिवार्य विषय है, जिसमें अनुत्तीर्ण होने पर स्नातक स्तर भाग-एक के छात्र/छात्राओं को एक अन्य विषय के साथ पूरक की पात्रता होगी। पर्यावरण विज्ञान के सैद्धांतिक एवं फील्ड वर्क में संयुक्त रूप से 33% (तैतीस प्रतिशत) अंक उत्तीर्ण होने के लिए अनिवार्य होंगे।

स्नातक स्तर भाग-एक के समस्त नियमित/भूतपूर्व/अमहाविद्यालयीन छात्र/छात्राओं को अपना फील्ड वर्क सैद्धांतिक परीक्षा की समाप्ति के पश्चात् 10 (दस) दिनों के भीतर संबंधित महाविद्यालय/परीक्षा केन्द्र में जमा करेंगे एवं महाविद्यालय के प्राचार्य/केन्द्र अधीक्षक, परीक्षकों की नियुक्ति के लिए अधिकृत रहेंगे तथा फील्ड वर्क जमा होने के सात दिनों के भीतर प्राप्त अंक विश्वविद्यालय को भेजेंगे।

कृपया - पर्यावरण विज्ञान व मानवाधिकार विषय
का पाठ्यक्रम अनुगोहनार्थ प्रस्तुत ई।

Dr. R. S. S.
11/11/13

1. Prof. A. K. Gupta - 11/11/13
2. Prof. C. L. Patel
3. Prof. R. Prasad

Part-I

SYLLABUS FOR ENVIRONMENTAL STUDIES AND HUMAN RIGHTS FOR UNDER
GRADUATE

(paper code - 0828)

M.M. 75

UNIT -I THE MULTI DISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES:

Definition, Scope and Importance

Natural Resources:

Renewable and Nonrenewable Resources:

Natural resources and associated problems

- (a) Forest resources: Use and over-exploitation, deforestation, Timber extraction, mining, dams and their effects on forests and tribal people and relevant forest Act.
- (b) Water resources: Use and over-utilization of surface and ground water, floods drought, conflicts over water, dams benefits and problems and relevant Act.
- (c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources.
- (d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity.
- (e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources.
- (f) Land resources: Land as a resource, land degradation, man induced landslides soil erosion and desertification.

UNIT-II ECOSYSTEM

(12 Lecturer)

(a) Concept, Structure and Function of an ecosystem

- Producers, consumers and decomposers.
- Energy flow in the ecosystem
- Ecological succession.
- Food chains, food webs and ecological pyramids.
- Introduction, Types, Characteristic Features, Structure and Function of Forest, Grass, Desert and Aquatic Ecosystem.

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(b) Biodiversity and its Conservation

- Introduction - Definition: genetic, species and ecosystem diversity.
- Bio-geographical classification of India.
- Value of biodiversity: consumptive use, productive use, social, ethics, aesthetic and option values.
- Biodiversity at global, National and local levels.
- India as mega-diversity nation.
- Hot spots of biodiversity
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wild life conflict.
- Endangered and endemic species of India.
- Conservation of biodiversity: In situ and Ex-situ conservation of biodiversity.

UNIT-III ENVIRONMENTAL POLLUTION

(12 Lecturer)

Definition

(a) Causes, effect and control measures of -

- Air water, soil, marine, noise, nuclear pollution and Human population.
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Disaster Management: floods, earthquake, cyclone and landslides.

(b) Environmental Management

(12 Lecturer)

- From Unsustainable to sustainable development.
- Urban problems related to energy.
- Water conservation, rain water harvesting, watershed management.
- Resettlement and rehabilitation of people, its problems and concerns.
- Environmental ethics: Issues and possible solutions.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust.

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Wasteland reclamation.

- Environment Protection Act: Issues involved in - enforcement of environmental legislation.
- Role of Information Technology in Environment and Human Health.

UNIT-IV

General background and historical perspective- Historical development and concept of Human Rights, Meaning and definition of Human Rights, Kind and Classification of Human Rights.

Protection of Human Rights under the UNO Charter, Protection of Human Rights under the Universal Declaration of Human Rights, 1948

Convention on the Elimination of all Forms of Discrimination against women

Convention on the Rights of the Child, 1989

UNIT-V

Impact of Human Rights norms in India, Human Rights under the Constitution of India, Fundamental Rights under the Constitution of India, Directive Principles of State Policy under the Constitution of India, Enforcement of Human Rights in India

Protection of Human Rights under the Human Rights Act, 1993 - National Human Rights Commission, State Human Rights Commission and Human Rights court in India.

Fundamental Duties under the Constitution of India

Reference/Books Recommended:

1. SK Kapoor- Human rights under International Law and Indian Law
2. HO Agrawal- Internation Law and Human Rights
3. एस. के. कपूर – मानव अधिकार
4. जे. एन. पान्डेय – भारत का संविधान
5. एम. डी. चतुर्वेदी – भारत का संविधान
6. J. N. Pandey - Constitutional Law of India
7. Agarwal K.C. 2001 Environmental Biology, Nidi Pub. Ltd. Bikaner
8. Bharucha Erach, the Biodiversity of India, Mapin Pub. Pvt. Ltd. Ahmedabad 380013, India, Email: mapin@icenet.net(R)

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9. Bruinner R.C. , 1989, Hazardous Waste Incineration, Mc Graw Hill Inc. 480p
10. Clark R.S. Marine Pollution, Clanderson Press Oxford (TB)
11. Cuningham, W.P. Cooper, T.H. Gorhani, E&Hepworth, M.T. 200
12. Dr. A.K. -Environmental Chemistry, Wiley Eastern Ltd.
13. Down to Earth, Center for Science and Environment (R)
14. Gloick, H.P. 1993 Water in crisis, Pacific Institute for studies in Deve, Environment & Security. Stockholm Eng. Institute. Oxford University, Press.m 473p
15. Hawkins R.E. Encyclopedia of Indian Natural History, Bombay Natural History Society, Mumbai (R)
16. Heywood, V.H. & Watson, R.T. 1995 Global Biodiversity Assessment, Cambridge Uni. Press 1140p
17. Jadhav H. & Bhosale, V.H. 1995, Environmental Protection and Law. Himalaya pub. House, Delhi 284p
18. Mckinney M.L. & School R.M. 1996, Environmental Science systems & Solutions, web enhanced edition, 639p
19. Mhaskar A.K. Matter Hazardous, Techno-Science Publication (TB)
20. Miller T.G. Jr. Environment Science, Wadsworth Publishing Co. (TB)
21. Odum, E.P. 1971, Fundamentals of Ecology, W.B. Saunders Co. USA, 574p
22. Rao M.N. & Datta, A.K. 1987, Waste water treatment. Oxford & IBH Pub. Co. Pvt. Ltd. 345p
23. Sharma B.K. 2001, Environmental Chemistry, Goel Pub. House, Meerut
24. Survey of the Environment, The Hidu (M)
25. Townsend C. Harper J. and Michael Begon, Essentials of Ecology, Blackwell Science (TB)
26. Trivedi R.K. Handbook of Environment Laws, Rules, Guidelines, Compliances and Standards, Vol I and II, Environment Media (R)
27. Trivedi R.K. and P.K. Goel, Introduction to air pollution, Techno-Science publication (TB)
28. Wanger K.D. 1998, Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p

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B.A. /B.Sc. Part I

**PAPER - I
PHYSICAL GEOGRAPHY**

**Max. Marks: 50
(Paper Code-0117)**

- Unit I** The Nature and Scope of Physical Geography. Origin of the Earth, Geological Time Scale, Earth's Interior, Continental Drift Theory (Wegner), Plate Tectonics, Isostasy.
- Unit II** Earth movements: Earthquakes and Volcanoes. Rocks, Weathering, Erosion, and Normal cycle of erosion, Evaluation of landscapes- Fluvial, Arid, Glacial, Karts and Coastal landscape.
- Unit III** Elements of Weather and Climate, Composition and Structure of the Atmosphere. World patterns of Atmospheric Temperature, Pressure, and Wind.
- Unit IV** Atmospheric Moisture, and Disturbances, Climatic Classification (Koppen and Thornthwait) types, characteristics and World patterns.
- Unit V** Surface relief of Pacific Ocean, Atlantic Ocean, and Indian Ocean. Distribution of Temperature and Salinity of oceans and seas, Currents and Tides, Ocean Deposits and Coral Reefs, and Oceanic Resources.

Books Recommended:

1. Barry, R. G. and Chorley, R. J. (1998): Atmosphere, Weather and Climate. Routledge, London.
2. Bryant, H. Richard (2001): Physical Geography Made Simple, Rupa and Company. New Delhi
3. Bunnnett, R.B. (2003): Physical Geography in Diagrams, Fourth GCSE edition, Pearson Education (Singapore) Private Ltd.
4. Garrison, T. (1998): Oceanography, Wordsworth Company., Belmont.
5. Lake, P. (1979): Physical Geography (English and Hindi editions), Cambridge University Press, Cambridge.
6. Lal, D.S. 1993 : Climatology, 3rd edition, Chaitanya Pub. House, New Delhi
7. Leong Goh Cheng (2003): Certificate Physical and Human Geography, Oxford University Press, New Delhi.
8. Monkhouse, F.J. (1979): Physical Geography. Methuen, London
9. Singh, S. (2003): Physical Geography. (English and Hindi editions.). Prayag Pustak Bhawan, Allahabad;
10. Trewartha, G.T., Robinson, A.H., Hammond, E.H., and Horn, A.T. (1976/1990): Fundamentals of Physical Geography, 3rd edition. MacGraw-Hill, New York.
11. Singh, M.B. (2001): *Bhoutik Bhugol*, Tara Book Agency, Varanasi
12. Strahler, A.N. and Stahler, A.M. (1992): Modern Physical Geography. John Wiley and Sons, New York.

B.A. /B.Sc. Part I

**PAPER - II
HUMAN GEOGRAPHY**

Max. Marks: 50

(Paper Code-0118)

- Unit I** Definition and Scope of Human Geography. Man - environment relationship; Determinism, Possibilism, and Probabilism; Human Development Index (HDI).
- Unit II** Classification of Human Races – their Characteristics and Distribution; Human adaptation to environment: Eskimos, Bushman, Pigmy, Gond, Masai, and Naga.
- Unit III** Growth, Density and Distribution of World Population and factors influencing Spatial distribution; Over , Under, and Optimum Population; Migration of Population. .
- Unit IV** Settlements – Urban Settlements: Urbanization, Evolution and Classification, Trends of Urbanization.

Rural settlements: Characteristics, Types and Regional Pattern, Rural Houses in India - Types, Classification and Regional Pattern.
- Unit V** Issues – Global Warming, Climate Change, Deforestation, Desertification, Air, Water and Soil Pollution.

Books Recommended:

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. Kaushik, S.D. and Sharma, A.K. (1996): Principles of Human Geography (in Hindi), Rastogi Publication, Meerut.
9. Norton, W. (2008): Human Geography, Oxford University Press, New York. 5th ed.
10. Saxena, H. M. (2000): Environmental Management. Rawat Publications., Jaipur and New Delhi.
11. Singh, K. N. and Singh, J. (2001): *Manav Bhugol*. Gyanodaya Prakashan, Gorakhpur. 2nd edition.
12. Singh, L.R. (2005): Fundamentals of Human Geography, Sharda Pustak Bhawan, Allahabad
13. Smith, D. M.(1977): Human Geography- A Welfare Approach, Edward Arnold (Publishers) Ltd.,London
14. Stoddard, R.H., Wishart, D.J. and Blouet, B.W. (1986): Human Geography. Prentice-Hall, Englewood Cliffs, New Jersey.

PAPER - III
PRACTICAL GEOGRAPHY
Max. Marks: 50

SECTION A

CARTOGRAPHY AND STATISTICAL METHODS (M.M. 25)

Unit I Scale: Statement Scale, Representative Fraction (R.F.), Linear scale – Simple, Diagonal, Comparative, and Time Scales.

Unit II Contour: Methods of showing relief; Hachures, Contours; Representation of different landforms by contours.

Unit III Graph and Diagram: Line graph, Bar Diagram (Simple and Compound), Circle Diagram, Pie Diagram

Unit IV Statistical Technique: Mean, Median and Mode

SECTION B

SURVEYING - (M.M. 15)

Unit V Chain and Tape Survey. Triangulation method, Open Traverse and Closed Traverse

PRACTICAL RECORD AND VIVA VOCE (M.M. 10)

Books Recommended:

1. Davis, R.E. and Foote, F.S. (1953): Surveying, 4th edition, McGraw Hill Publication, New York
2. Jones, P.A. (1968): Fieldwork in Geography, Longmans, Green and Company Ltd., First Publication, London
3. Monkhouse, F. J. and Wilkinson, F.J. (1985): Maps and Diagrams. Methuen, London
4. Natrajan, V. (1976): Advanced Surveying, B.I. Publications., Mumbai
5. Pugh, J.C. (1975): Surveying for Field Scientists, Methuen and Company Ltd., London, First Publication.
6. Raisz, E. (1962): General Cartography. John Wiley and Sons, New York. 5th edition.
7. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
8. Sharma, J. P. (2001): *Prayogik Bhugol.*, Rastogi Publication, Meerut 3rd edition.
9. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions). Kalyani Publishers, New Delhi,.
10. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
11. Venkatramaiah, C. (1997): A Text Book of Surveying, Universities Press, Hyderabad.

प्रथम प्रश्न पत्र : राजनीतिक सिद्धान्त Paper I : Political Theory

- इकाई 1 : राजनीति विज्ञान का अर्थ, परिभाषा (आधुनिक अवधारणा सहित) । राजनीति एक विशिष्ट मानवीय व्यवहार के रूप में । शक्ति, सत्ता, प्रभाव : अर्थ, विशेषताएं, प्रकार । राजनीति विज्ञान की अध्ययन पद्धतियां : परम्परागत एवं व्यवहारवाद एवं उत्तर व्यवहारवाद ।
- Unit I : Meaning and Definition of Political Science (with modern concept). Politics as a specific human behaviour. Power, Authority and Influence : meaning, features and kinds. Method of Study to Political Science : Traditional , Behaviouralism and Post Behaviouralism.
- इकाई 2 : राज्य एवं उसके आवश्यक तत्व । राज्योत्पत्ति के विभिन्न सिद्धान्त, मार्क्सवादी सिद्धान्त । सावयविक सिद्धान्त ।
- Unit 2 : State and its essential elements. Various theories of the origin of the State, Marxist theory . Organismic Theory.
- इकाई 3 : सम्प्रभुता एवं उसकी बहुलवादी आलोचना । अधिकार: अर्थ, प्रकार , सिद्धान्त । कर्तव्य । स्वतन्त्रता : अर्थ , प्रकार, संरक्षण । समानता : अर्थ , प्रकार एवं स्वतन्त्रता से सम्बंध । प्रजातन्त्र : परिभाषा, व्यापक अर्थ, चुनौतियां, सफलता के लिए आवश्यक शर्तें , गुण-दोष । प्रत्यक्ष प्रजातन्त्र ।
- Unit 3: Sovereignty and its pluralistic criticism. Rights : meaning, kinds and theories. Duties. Liberty : meaning, kinds , safeguards. Equality : meaning, kinds and relations with Liberty. Democracy : meaning, comprehensive meaning, challenges, conditions for its success, merits and demerits. Direct Democracy.
- इकाई 4 : शासन के प्रकार : एकात्मक व संघात्मक , संसदीय व अध्यक्षीय, निरंकुशतन्त्र । शासन के अंग : कार्यपालिका, व्यवस्थापिका, न्यायपालिका । शक्ति पृथक्करण का सिद्धान्त व नियंत्रण –संतुलन का सिद्धान्त । संविधान : अर्थ , प्रकार । प्रतिनिधित्व के सिद्धान्त एवं निर्वाचन प्रणालियां ।
- Unit 4 : Kinds of Government : Unitary and Federal, Parliamentary and Presidential. Dictatorship. Organs of Government : Executive, Legislature and Judiciary. Theory of Separation of Powers and Checks and Balances. Constitution : meaning and kinds. Theories of representation and Electoral Process.
- इकाई 5 : लोककल्याणकारी राज्य । दल पद्धति : अर्थ , प्रकार, पद्धति । दबाव समूह : अर्थ, प्रकार, तकनीक । सामाजिक परिवर्तन : अर्थ, विशेषताएं , सिद्धान्त । नारीवाद, राष्ट्रवाद ।
- Unit 5 : Public Welfare State. Party System : meaning , kinds , process. Pressure Groups : meaning, kinds and technique. Social Change : meaning, characteristics, theories. Feminism. Nationalism.

राजनीतिक सिद्धांत

बी.ए. प्रथम

प्रथम प्रश्न पत्र

1. ओ.पी. गाबा, समकालीन राजनीतिक सिद्धांत, मयूर पेपर बैक्स नोएडा।
2. ओ.पी. गाबा, राजनीति सिद्धांत की रूपरेखा, मयूर पेपर बैक्स नोएडा।
3. जे.सी. जौहरी व सीमा जौहरी, आधुनिक राजनीति विज्ञान के सिद्धांत, स्टर्लिंग पब्लिकेशन।
4. पंत गुप्ता जैन, राजनीति शास्त्र के आधार, सेन्ट्रल पब्लिकेशिंग हाऊस इलाहाबाद।
5. प्रो. आनंद प्रकाश अवस्थी, भारतीय शासन एवं राजनीति, लक्ष्मीनारायण अग्रवाल, आगरा।
6. Andrew Haywood Political Theory, An Introduction.
- 7- O.P. Gaba An Introduction to Political Theory, Macmillan India Ltd.

द्वितीय प्रश्न पत्र : भारतीय शासन एवं राजनीति Paper II : Indian Government and Politics

- इकाई 1 : भारतीय राष्ट्रीय आन्दोलन : 1858 का प्रथम स्वतन्त्रता संग्राम, असहयोग आन्दोलन, सविनय अवज्ञा आन्दोलन, भारत छोड़ो आन्दोलन । भारत का संविधानिक विकास : 1858, 1909, 1919 और 1935 का भारत शासन अधिनियम ।
- Unit 1 : Indian National Movement : First Independence Movement 1858, Non cooperation Movement, Civil Disobedience Movement and Quit India Movement. Constitutional Development of India : Govt. of India Act of 1858, 1909, 1919 and 1935.
- इकाई 2 : भारतीय संविधान : विशेषताएं , प्रस्तावना, स्रोत, । संघीय व्यवस्था , मौलिक अधिकार, मूल कर्तव्य, नीति निर्देशक तत्व । संविधान संशोधन प्रक्रिया ।
- Unit 2 : Constitution of India : Characteristics, Preamble, Sources. Federal System. Fundamental Rights and Duties, Directive Principles of State Policy. Constitution Amendment Process.
- इकाई 3 : संघीय कार्यपालिका : राष्ट्रपति, उपराष्ट्रपति, मन्त्रिपरिषद् और प्रधानमंत्री । संघीय व्यवस्थापिका : संसद : लोकसभा और राज्यसभा । संसदीय प्रक्रिया ।
- Unit 3 : Union Executive : President , Vice President, Council of Ministers and Prime Minister. Union Legislature : Parliament: Lok Sabha and Rajya Sabha. Parliamentary Procedure.
- इकाई 4 : संघीय न्यायपालिका : सर्वोच्च न्यायालय : गठन, क्षेत्राधिकार, न्यायिक पुनरावलोकन, न्यायिक सक्रियतावाद । राज्य कार्यपालिका : राज्यपाल , मन्त्रिपरिषद् और मुख्यमंत्री ।
- Unit 4 : Union Judiciary : Supreme Court : Organisation, Jurisdiction, Judicial Review, Judicial Activism. State Executive : Governor, Council of Ministers and Chief Minister.
- इकाई 5 : राज्य व्यवस्थापिका : विधानसभा एवं विधानपरिषद् । निर्वाचन आयोग व चुनाव सुधार । राष्ट्रीय व क्षेत्रीय दल । भारतीय राजनीति के प्रमुख मुद्दे : जाति, धर्म, भाषा और क्षेत्र । पंचायती राज व्यवस्था ।
- Unit 5 : State Legislature : Legislative Assembly and Legislative Council. Election Commission and Election Reforms. National and Regional Parties. Major issues of Indian Politics : Caste, Religion, Language and Region. Panchayati Raj System.

संदर्भ पुस्तकें (Reference Books)

8. डॉ. सुभाष कश्यप, भारत का संवैधानिक विकास और संविधान, हिन्दी माध्यम कार्यान्वयन निदेशालय दिल्ली विश्वविद्यालय ।
9. डॉ. सुभाष कश्यप, हमारी संसद, भारत की संसद एक परिचय, राष्ट्रीय पुस्तक न्यास ।
10. डॉ. रूपा मंगलानी, भारतीय शासन एवं राजनीति, राजस्थान हिन्दी ग्रंथ अकादमी जयपुर ।
- 11- M.V. Pylee , Constitutional History of India , S.Chand.
- 12- D.D. Basu Indian Constitution

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.

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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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BOTANY

PAPER-I (Paper Code-0915)

PLANT PHYSIOLOGY, BIOCHEMISTRY AND BIOTECHNOLOGY

M.M. : 50

- UNIT-I** Plant-water relations : Importance of water to plant life ; physical properties of water; diffusion and osmosis; absorption, transport of water and transpiration ; physiology of stomata.
Mineral nutrition : Essential macro and micro-elements and their role ; mineral uptake; deficiency and toxicity symptoms.
- UNIT-II** Transport of organic substances : Mechanism of phloem transport ; source-sink relationship ; factors affecting translocation.
Basic of enzymology : Discovery and nomenclature ; characteristics of enzymes ; concept of holoenzyme apoenzyme, coenzyme and cofactors ; regulation of enzyme activity, mechanism of action.
Photosynthesis : Significance ; historical aspects ; photosynthetic pigments ; action spectra and enhancement effects ; concept of two photosystems; Z-scheme ; photo-phosphorylation ; Calvin cycle ; C4 pathway ; CAM plants ; photorespiration.
- UNIT-III** Respiration : ATP - the biological energy currency ; aerobic and anaerobic respiration; Kreb's cycle, electron transport mechanism (chemi-osmotic theory) ; redox potential; oxidative phosphorylation ; pentose phosphate pathway.
Nitrogen and lipid metabolism : Biology of nitrogen fixation ; importance of nitrate reductase and its regulations ; ammonium assimilation ; structure and function of lipids; fatty acid biosynthesis ; Beta-oxidation ; saturated and unsaturated fatty acids; storage and mobilization of fatty acids.
- UNIT-IV** Growth and development : Definitions ; phases of growth and development ; kinetics of growth, seed dormancy, seed germination and factors of their regulation ; plant movements ; the concept of photoperiodism ; physiology of flowering ; florigen concept; biological clocks ; physiology of senescence, fruit ripening ; plant hormones auxins, gibberellins, cytokinins, abscisic acid and ethylene, history of their discovery, biosynthesis and mechanism of action ; photomorphogenesis ; phytochromes and cryptochromes, their discovery, physiological role and mechanism of action.
- UNIT-IV** Genetic engineering : Tools and techniques of recombinant DNA technology ; cloning vectors ; genomic and cDNA library ; transposable elements ; techniques of gene mapping and chromosome walking.
Biotechnology : Functional definition ; basic aspects of plant tissue culture ; cellular totipotency, differentiation and morphogenesis ; biology of Agrobacterium ; vectors for gene delivery and marker genes ; salient achievements in crop biotechnology.

PAPER-II (Paper Code-0916)

ECOLOGY AND UTILIZATION OF PLANTS

M.M. : 50

- UNIT-I** Plants and environment : Atmosphere (gaseous composition), water (properties of water cycle), light (global radiation, photosynthetically active radiation), temperature, soil (development, soil profiles, physico-chemical properties), and biota.
Morphological, anatomical and physiological responses of plants to water (hydrophytes and xerophytes), temperature (thermoperiodicity), light (photoperiodism, heliophytes and sciophytes) and salinity.

- UNIT-II** Community Ecology : Community characteristics, frequency, density, cover, life forms biological spectrum ; ecological succession.
Ecosystems : Structure, abiotic and biotic components ; food chain, food web, ecological pyramids, energy flow ; biogeochemical cycles of carbon, nitrogen and phosphorus.
- UNIT-III** Population ecology : Growth curves ; ecotypes ; ecads.
Biogeographical regions of India.
Vegetation types of India : Forests and grasslands.
- UNIT-IV** Utilization of Plants
Food plants : Rice, wheat, maize, potato, sugarcane.
Fibres : Cotton and jute.
Vegetable oils : Groundnut, mustard and coconut
General account of sources of firewood, timber and bamboos.
- UNIT-V** Spices : General account.
Medicinal plants : General account
Beverages : Tea and coffee.
Rubber.

PRACTICAL SCHEME

M.M. 50

01. Physiology	08
02. Ecology	08
03. Utilization of Plants	05
04. Biochemistry / Biotechnology	05
05. Spotting (1-5 spots)	10
06. Project work	04
07. Viva V.	05
08. Sessional	05
	50

Suggested Laboratory Exercises

- To study the permeability of plasma membrane using different concentrations of organicsolvents.
- To study the effect of temperature on permeability of plasma membrane.
- To prepare the standard curve of protein and determine the protein content in unknown samples.
- To study the enzyme activity of catalase and peroxidase as influenced by pH and temperature.
- Comparison of the rate of respiration of various plant parts.
- Separation of chloroplast pigment by solvents method.
- Determinig the osmotic potential of vacuolar sap by plsmolytic method.
- Determining the water potential of any tuber.
- Separation of amino acids in a mixtue by paper chromatography and their identification by comparison with standards.
- Bioassay of auxin, cytokinin, GA. ABA and ethylene using appropriate plant material.
- Demonstration of the technique of micropropagation by using different explants, e.g. axillary buds, shoot meristems.
- Demonstration of the technique of anther culture.
- Isolation of protoplasts from different tissues using commercially available enzymes.
- Demonstration of root and shoot formation from the apical and basal portion of stem segments in liquid medium containing different hormones.

Suggested Laboratory Exercises (Ecology)

1. To determine minimum number of quadrats required for reliable estimate of biomass in grasslands.
2. To study the frequency of herbaceous species in grassland and to compare the frequency distribution with Raunkair's Standard Frequency Diagram.
3. To estimate importance Value Index for grassland species on the basis of relative frequency, relative density and relative biomass in protected and grazed grassland.
4. To measure the vegetation cover of grassland through point frame method.
5. To measure the aboveground plant biomass in a grassland.
6. To determine Kemp's constant for dicot and monocot leaves and to estimate the leaf area index of a grassland community.
7. To determine diversity indices (richness, Simpson, Shannon-Wiener) in grazed and protected grassland.
8. To estimate bulk density and porosity of grassland and woodland soils.
9. To determine moisture content and water holding capacity of grassland and woodland soil.
10. To study the vegetation structure through profile diagram.
11. To estimate transparency, pH and temperature of different water bodies.
12. To measure dissolved oxygen content in polluted and unpolluted water samples.
13. To estimate salinity of different water samples.
14. To determine the percent leaf area injury of different leaf samples collected around polluted sites.
15. To estimate dust holding capacity of the leaves of different plant species.

PRACTICAL

Suggested Laboratory Exercises (for Utilization of Plants)

1. Food Plants : Study of the morphology, structure and simple microchemical tests of the food storing tissues in rice, wheat, maize, potato and sugarcane, Microscopic examination of starch in these plants (excepting sugarcane)
2. Fibres : Study of cotton flowers, sectioning of the cotton ovules/developing seeds to trace the origin and development of cotton fibres. Microscopic study of cotton and test for cellulose, Sectioning and staining of jute stem to show the location and development of fibres. Microscopic structure. Test for lignocellulose.
3. Vegetable oils : Study of hand sections of groundnut, mustard and coconut and staining of oil droplets by Sudan III and Sudan Black.
4. Field visits : To study sources of firewood (10 plants), timber-yielding trees (10 trees) and bamboos. A list to be prepared mentioning special features.
5. Spices : Examine black pepper, cloves, cinnamon (hand sections) and opened fruits of cardamom and describe them briefly.
6. Preparation of an illustrated inventory of 10 medicinal plants used in indigenous systems of medicine or allopathy : Write their botanical and common names, parts used and disease/disorders for which they are prescribed.
7. Beverages : Cut Sections of boiled coffee beans and tea leaves to study the characteristic structural features.
8. Rubber : Collect illustrative materials of *Hevea brasiliensis* ; morphology of the plant and tapping practices, history of rubber. List the many uses of rubber.

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ZOOLOGY

Paper-I (Paper Code-0917)

Ecology, Environmental-biology ; Toxicology ; Microbiology and Medical Zoology.

2 Attempting one question from each unit will be compulsory. 100% choice be given.

UNIT-I (ECOLOGY)

- 1 Aims and scopes of Ecology.
- 2 Major ecosystems of the world-Brief introduction
- 3 Population- Characteristics and regulation of densities.
- 4 Communities and Ecosystems.
- 5 Biogeochemical cycles
- 6 Air and water pollution
- 7 Ecological succession

UNIT-II (ENVIRONMENTAL BIOLOGY)

- 1 Laws of limiting factors
- 2 Food chain in a freshwater ecosystem.
- 3 Energy flow in ecosystem-Trophic levels
- 4 Conservation of Natural resources
- 5 Environmental impact Assessment

UNIT-III (TOXICOLOGY)

- 1 Definition of Toxicity
- 2 Classification of toxicants
- 3 Principle of systematic toxicology
- 4 Toxic agents and their action- Metallic and inorganic agents
- 5 Animal poisons - Snake-venom, Scorpion and bee poisoning
- 6 Food poisoning

UNIT-IV (MICROBIOLOGY)

- 1 General and Applied microbiology.
- 2 Microbiology of Domestic water and sewage
- 3 Microbiology of milk and milk products
- 4 Industrial microbiology

UNIT-V (MEDICAL MICROBIOLOGY)

- 1 Brief introduction to pathogenic micro-organisms, Rickettsia, Spirochaetes and Bacteria.
- 2 Brief account of life-history and pathogenicity of the following pathogens with reference to man ; Prophylaxis and treatment -
 - (a) Pathogenic Protozoans - Entamoeba, Trypanosoma, and Giardia
 - (b) Pathogenic helminths - Schistosoma
 - (c) Nematode Pathogenic parasites of man
- 3 Vector insects

PAPER-II

(Paper Code-0918)

(GENETIC'S, CELL PHYSIOLOGY, BIOCHEMISTRY, BIOTECHNOLOGY AND BIOTECHNIQUES)

Note : Attempting one question from each unit will be compulsory, 100% choice be given.

UNIT-I (GENETIC'S)

1. Linkage and Linkage maps
2. Varieties of gene expression - Multiple alleles ; lithogenesis ; Pleiotropic genes; gene interaction ; epistasis.
3. Sexchromosome systems, and sex-linkage.
4. Mutation and chromosomal alterations ; meiotic consequences.
5. Human genetics - chromosomal and single gene disorders (somatic cell genetics)

UNIT-II (CELL PHYSIOLOGY)

1. General idea about pH and Buffer.
2. Transport across membrane - cell membrane; Mitochondria and Endoplasmic reticulum.
3. Active transport and its mechanism; Active transport in Mitochondria and Endoplasmic reticulum.
4. Hydrolytic enzymes - Their chemical nature, Activation and specificity.

UNIT-III (BIOCHEMISTRY)

1. Amino acids and Peptides - Basic structure and biological function.
2. Carbohydrate and its metabolism - Glycogenesis; Gluconeogenesis; glycolysis, Glycogenolysis; Cose-cycle.
3. Lipid metabolism - Oxidation of glycerol; oxidation of fatty acid.
4. Protein metabolism - Deamination, Transamination, Transmethylation; Biosynthesis of Protein;

UNIT-IV (BIOTECHNOLOGY)

1. Biotechnology - Scope and importance.
2. Recombinant DNA and Gene cloning.
3. Cloned genes and other tools of biotechnology.
4. Applications of biotechnology in (i) Pharmaceutical industry, and (ii) Food processing industry.

UNIT-V (BIOTECHNIQUE)

Principles and techniques about the following

1. pH meter
2. Colorimeter
3. Microscopy-Light microscopes, Phase contrast and Electron microscopes.
4. Centrifugation
5. Separation of biomolecules by chromatography, and Electrophoresis
6. Histochemical methods for determination of Protein, Lipids, and carbohydrate

PRACTICAL WORK

The Practical work in general shall be based on syllabus prescribed in theory.

The candidates will be required to show knowledge of the following :

1. Estimation of population density, Percentage frequency, Relative density.
2. Analysis of Producers and consumers in grassland.
3. Detection of gram-negative and gram-positive bacteria.
4. Blood group detection (A,B, AB & O).
6. R.B.C., W.B.C. count.
6. Blood coagulation time.
7. Preparation of Hematin crystals from blood of rat.
8. Observation of Drosophila, wild and mutant.
9. Chromatography-Paper or gel.
10. Colorimetric estimation of hemoglobin.
11. Mitosis in onion root tip.
12. Biochemical detection of Carbohydrate, Protein and Lipid.
13. Study of Permanent slides of Parasites, based on theory paper.
14. Working Principles of pH meter, Colorimeter, centrifuge and microscopes.

SCHEDULE FOR PRACTICAL EXAMINATION

Duration : 4 Hrs.

Max Marks : 50

- | | |
|--|----------|
| 1. Haematological Experiment :
(R.B.Cs./W.B.Cs. Counting/Blood group detection) | 08 marks |
| 2. Ecological Experiment :
(Estimation of Population Density/Frequency/relative Density) | 06 marks |
| 3. Staining of Gram +ve and Gram -ve Bacteria/cytological
experiment : Mitosis in onion root tip | 05 marks |
| 4. Biochemical Experiment :
(biochemical detection of carbohydrate/protein lipid) | 06 marks |
| 5. Chromatography | 05 marks |
| 6. Spotting :
Study of permanent slides of Parasites : 3
Comments on working Principles of pH meter /
Calorimeter / centrifuge and Microscope : | 10 marks |
| 7. Viva Voce | 05 marks |
| 8. Sessional : | 05 marks |
