प्राचीन भारतीय इतिहास, संस्कृति तथा पुरातत्व
प्रथम : प्रश्न–पत्र
B.A. Part I Paper I
भारत का राजनीतिक इतिहास (पेपर कोड 0133)
(हड़प्पा संस्कृति से 319 ई. तक)
Political History of India (Harappa Culture to 319 A.D.)

पूर्णांक : 75

उद्देश्य : इस पाठ्यक्रम का उद्देश्य छात्रों को संबंधित कालखण्ड के राजनीतिक इतिहास की समुचित जानकारी देना है।

इकाई– 1 (1) प्राचीन भारतीय इतिहास के स्रोत (Sources of Ancient Indian History)
        (2) हड़प्पा तथा समकालीन ताम्राश्म संस्कृतियॉ (Harappa and Contemporary Chalcolithic Culture)
        (3) वैदिक युग (Vedic Age)

इकाई– 2 (1) महाजन पद युग (Mahajanpada Age)
        (2) मगध साम्राज्य का उत्कर्ष (Rise of Magadha Kingdom)

इकाई– 3 (1) सिकन्दर का आक्रमण और उसके प्रभाव (Alexander's Invasion and it's impact)
        (2) मौर्य साम्राज्य का उत्थान और उसके प्रभाव (Rise of Mauryan empire and its impact)

इकाई– 4 (1) हिन्द–यूनानी (Indo-Greeks)
        (2) शुंग (Shungas)
        (3) सातवाहन (Satvahanas)
        (4) शक–क्षत्रप, पार्थियन (Shak-Kshatrapas, Parthiyan)
        (5) खारवेल (Kharvela)

इकाई– 5 (1) संगम युग (Sangam Age)
        (2) कुषाण (Kushanas)
        (3) मालव, यौधेय, अर्जुनायन तथा औदुम्बर (Malavas, Youdheyas, Arjunayana and Audumbara)
        (4) नागवंश (Nagas)

सहायक ग्रंथ :
1. एच.सी. रायचौधरी   – प्राचीन भारत का राजनीतिक इतिहास
2. के.ए. नीलकंठ शास्त्री   – दक्षिण भारत का इतिहास
3. कृष्णदत्त बाजपेयी तथा विमलचंद्र पांडेय   – प्राचीन भारत का इतिहास
4. विमल चन्द्र पांडेय   – प्राचीन भारत का राजनीति तथा सांस्कृतिक इतिहास भाग एक
5. किरन कुमार थप्याल   – सैंधव सम्यता
6. गुलाम, याजदानी (संपा.)   – दकन का इतिहास
7. राजबली पाण्डेय   – प्राचीन भारत
8. H.C. Roycoudhary   - Political History of Ancient India
9. R.C. Majumdar (Ed.)   - The Age of Imperial Unity
10. Romila Thaper   - History of India
11. K.A, Nilkanta Shastry   - History of South India
12. व्ही.डी.झा. सुष्मिता पाण्डेय, डॉ.ओम प्रकाश   – Ashoka and the declaim of Moury empire

प्राचीन भारतीय इतिहास, संस्कृति तथा पुरातत्व

प्रथम : प्रश्न–पत्र

B.A. Part I Paper II

भारत का राजनीतिक इतिहास (319 ई.से 1300 ई. सन् तक)

Political History of India (From 319 A.D. to 1300 A.D.)

पूर्णांक : 75

उद्देश्य : इस पाठ्यक्रम का उद्देश्य विद्यार्थियों को संबंधित कालखण्ड के राजनीतिक इतिहास का समुचित ज्ञान प्रदान करना है।

इकाई– 1 (1) गुप्तों की उत्पत्ति एवं प्रारंभिक इतिहास (Rise of Guptas and their early History)
(2) चन्द्रगुप्त प्रथम, रामगुप्त, समुद्रगुप्त (Chandragupta – I, Ramagupta, Samudragupta)
(3) कुमारगुप्त प्रथम, स्कन्दगुप्त (Kumargupta – I, Shandgupta)
(4) वाकाटक राजवंश, गुप्त–वाकाटक सम्बन्ध (Vakataka Dynasty, Gupta Vakataka relation)

इकाई– 2 (1) परवर्ती गुप्त राजवंश (Later Gupta Rulers)
(2) मौखरी (Maukharis)
(3) वर्धन राजवंश और हर्ष का प्रशासन (Vardhana Dynasty and Administration of Harsha)

इकाई– 3 (1) बादामी के चालुक्य (Chalukyas of Badami)
(2) कांची के पल्लव (Pallavas of Kanchi)
(3) चोल तथा उनका प्रशासन (Cholas and their administration)

इकाई– 4 (1) गुर्जर प्रतिहार (Gurjara Pratihara)
(2) राष्ट्रकूट (Rashtrakutas)
(3) पाल (Palas)
(4) गाहड़वाल (Gahadwalas)

इकाई– 5 (1) चन्देल (Chandela)
(2) परमार (Parmaras)
(3) चाहमान (Chahmanas)
(4) त्रिपुरी के कलचुरि (Kalachuris of Tripuri)
(5) रतनपुर के कलचुरि (Kalachuris of Ratanpur)

अनुशंशित पुस्तके :

1. उदयनारायण राय — गुप्त राजवंश तथा उसका इतिहास (नया संस्करण) 1988
2. श्री राम गोयल — भारत का राजनैतिक इतिहास भाग 2 एवं 3
3. श्री राम गोयल — गुप्त साम्राज्य का इतिहास
4. Ashvini Agrawal - Rise and Fall of the imperial Gupta
5. विशुद्धानंद पाठक — उत्तर भारत का राजनीतिक इतिहास
6. अवध बिहारी लाल अवस्थी — राजपूत राजवंश
7. डी.सी.गांगुली — परमार राजवंश
8. भगवती प्रसाद पांथरी — मौखरी और पुष्पभूमि राजवंश
9. डॉ.के.ए.नीलकंठ शास्त्री — दक्षिण भारत का इतिहास
10. डॉ.बैजनाथ शर्मा — हर्षवर्धन
11. R.C. Majumdar & A.D. Pusalkar (Ed.) - The Classicale Age "The age of Imperial Unity"
    The Strangle for Empire
12. Majumdar, Roy Choudhary - An Advanced History of India Vol. I

REVISED SYLLBUS

B. A. Part- I (Economics)

Subject : Micro Economics, Paper-I (Code: 0111)

UNIT 1

Introduction - Definitions Nature and scope of Economics, Methodology in Economics, Utility - Cardinal and Ordinal approaches, Indifference curve, Consumer's equilibrium, Giffin goods, Demand - Law of Demand, Elasticity of demand Consumer's surplus

UNIT 2

Theory of production and cost, Production decision, Production function, Iso-quant, Factor substitution, Law of variable proportions, Returns to scale, Economies of scale, Different concepts of cost and their interrelation, Equilibrium of the firm.

UNIT 3

Market structure-perfect and imperfect markets, Equilibrium of a firm-Perfect competition, Monopoly and price discrimination, Monopolistic competition, Duopoly, Oligopoly, controlled and administered prices

UNIT 4

Factor pricing-Marginal productivity theory of distribution, Euler's theorem, Theories of wage determination, wages and collective bargaining, wage differentials, Rent - Scarcity Rent, differential rent, Quasi rent, Modern Rent Theory, Interest Classical and Keynesian Theories, Modern Theory, Profits - Innovation, Risk bearing and uncertainty theories

UNIT 5

Welfare economics: , What welfare economics is about ?, Role of value judgments in welfare economics, Pigou's contribution in the field of welfare economics, Concept and condition of Pareto optimality, New welfare economics: Kaldor-Hicks welfare criterion, Scitovsky paradox, Social welfare function and social choice: Bergson-Samuelson social welfare function, Prof. Amartya Sen's critique, Arrow impossibility theorem

References:

1. Bach, G. L. (1977) "Economics, " Prentice Hall of India, New Delhi.

2. Gauld, J.P. and Edward P. L. (1996), "Microeconomic Theory," Richard lrwin, Homewood

. 3. Henderson J. and R. E. Quandt (1980), "Microeconomic Theory : A Mathematical Approach",
McGraw Hill, New Delhi.

4. Heathfield and Wibe (1987), " An Introduction to Cost and Production Functions", Macmillan. London.

5. Koutsoyiannis, A. (1990), " Modern Microeconomics" , Macmillan.

6. Lipsey, R. G. and K. A. Chrystal (1999) "Principles of Economics ", (9th Edition), Oxford University
Press, Oxford. B.A.-Part-I (21) P

REVISED SYLLBUS

B. A. Part- I (Economics)

Subject : Indian Economy , Paper-II (Code: 0112)

UNIT 1

Pre and post independent Indian economy: A short introduction of economic policies of British India, State of economy at the time of independence, Planning exercise in India-Planning in India through different five Year Plans, The planning commission and NITI Aayog, Growth and development in pre-reform period, New Economic Reforms: Liberalization, Privatization and Globalization, Growth, development and structural change in post-reform period.

UNIT 2

Population and human development: Demographic trends and issues of education, health, malnutrition and migration. Growth and distribution: Trends and policies in poverty, inequality, unemployment and occupational distribution, International comparison in human development and poverty reduction

UNIT 3

Agriculture: Nature and importance, Trends in agriculture production and productivity, factors determining productivity, Land reforms, new agriculture strategies and green revolution, rural credit, Agricultural marketing, natural resources and infra-structure development: Performance, problems and policies, MUDRA yojana.

UNIT 4

Industry: Growth and productivity, Industrial policy and reforms, Growth and problems of small and cottage scale industries,Role of public sector enterprises in India's industrialization. Trends and performance in services.

UNIT 5

External Sector - Role of foreign trade, Trends in exports and imports, Composition and direction of India's foreign trade, Export promotion measures and the new trade policies, Recent macroeconomic scenario: National Income, investment, saving and inflation, Current macroeconomic policies and their impact, fiscal policies and monetary policy.

References

1. Uma Kapila, "Indian Economy : Performance and Policies," published by Academic Foundation.
2. Dutta and Sundram, "Indian Economy', S. Chand Publications.

3. Mishra and Puri, "Indian Economy," Himalaya Publishing House.
4. Economic Survey of India: various Issues, Published by Government of India.

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. Bunnett, 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.

B.A. /B.Sc. Part I

PAPER - III
PRACTICAL GEOGRAPHY
Max. Marks: 50

SECTION A

CARTOGRAPHY AND STASTISTICAL 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 3ʳⁿ. 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.

बी. ए. भाग एक B.A. Part I

राजनीति विज्ञान   Political Science

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 रुप में । शक्ति, सत्ता, प्रभाव : अर्थ, विशेषताएं, प्रकार । राजनीति विज्ञान की अध्ययन
पध्दतियां : 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 । अधिकारः 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, challanges, conditions for its success, merits
and demerits. Direct Democracy.

इकाई 4 :   शासन के प्रकार : एकात्मक व संघात्मक , संसदीय व अध्यक्षात्मक, 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. Feminis. 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.

बी. ए. भाग एक B. A. Part I

राजनीति विज्ञान Political Science

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, स्त्रोत, । संघीय व्यवस्था , मौलिक अधिकार, मूल कर्तव्य,नीति निर्देशक तत्व । संविधान संशोधन प्रकिया ।

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 प्रधानमन्त्री । संघीय व्यवस्थापिका :संसद : लोकसभा और राज्यसभा । संसदीय प्रकिया ।

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 मुख्यमन्त्री ।

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.

सद भ ुपर तक (Reference Books)

8. डॉ. सुभाष कश्यप, भारत का संवैधानिक विकास और संविधान, हिन्दी माध्यम कार्यान्वय निदेशालय दिल्ली विश्वविद्यालय।
   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

बी.ए. प्रथम वर्ष

संस्कृत साहित्य

प्रथम प्रश्नपत्र

टीप – बी.ए. प्रथम वर्ष में संस्कृत साहित्य के दो प्रश्न–पत्र होंगें एवं दोनों प्रश्न –पत्र 75– 75 अंकों के होंगें ।

नाटक, व्याकरण और अनुवाद   पूर्णांक – 75

इकाई –1   स्वप्नवासवदत्तम् – व्याख्या   अंक – 15

इकाई –2   स्वप्नवासवदत्तम् – समीक्षात्मक प्रश्न   अंक – 15

इकाई –3   1. सुबन्त (शब्दरूप) –   अंक – 15
राम, मुनि, भानु, पितृ, करिन्, कर्तृ, आत्मन्, लता, मति, नदी,
धेनु, मातृ, फल, वारि, सर्व, तद्, एतद्, यद्, इदम्, अस्मद्, युष्मद् ।
2. तिङन्त (धातुरूप) –
भ्वादि, दिवादि, तुदादि, चुरादि गण के अतिरिक्त अस् एवं कृ
धातुओं के लट्, लृट्, लङ्, लोट् एवं विधिलिङ् लकारों के रूप
3. अपठित गद्यांश पर आधारित प्रश्न

नोट– शब्द रूप एवं धातु रूप के विकल्प के रूप में अपठित गद्यांश पर आधारित प्रश्न भी पूछे जा सकते है ।

इकाई –4   प्रत्याहार, संज्ञा, सन्धि और विभक्त्यर्थ   अंक – 15

इकाई –5   हिन्दी से संस्कृत में अनुवाद   अंक – 15

अनुशंसित ग्रन्थ –

1.   रचनानुवाद कौमुदी – डा. कपिलदेव द्विवेदी
2.   संस्कृतस्य व्यावहारिकस्वरूपम् – डा. नरेन्द्र, श्री अरविन्द आश्रम
3.   संस्कृतव्याकरण – श्रीधर वसिष्ठ
4.   संस्कृत में अनुवाद कैसे करें – उमाकान्त मिश्र शास्त्री, प्रकाशक – भारती भवन
5.   लघु सिद्धान्त कौमुदी – श्री महेश सिंह कुशवाहा, प्रकाशक – चौखम्बा विद्याभवन, वाराणसी

सत्र 2018–19 से प्रस्तावित

बी.ए. प्रथम वर्ष

संस्कृत साहित्य

द्वितीय प्रश्नपत्र

गद्य, कथा एवं साहित्येतिहास   पूर्णांक – 75

इकाई –1   शुकनासोपदेशः – व्याख्या   अंक – 15

इकाई –2   हितोपदेशः (मित्रलाभः) – व्याख्या   अंक – 15

इकाई –3   शुकनासोपदेश एवं हितोपदेश के समीक्षात्मक प्रश्न   अंक – 15

इकाई –4   वैदिक एवं पौराणिक साहित्य का सामान्य परिचय   अंक – 15

              (वेद, ब्राह्मण, आरण्यक, उपनिषद्, वेदांगों एवं पुराणों का संक्षिप्त परिचय)

इकाई –5   निम्नलिखित कवियों का परिचय –   अंक – 15

              महाकवि कालिदास, भारवि, माघ, श्रीहर्ष, विशाखदत्त, बाणभट्ट,

              शूद्रक, विशाखदत्त, भवभूति ।

अनुशंसित ग्रन्थ –

1.   शुकनासोपदेश – प्रकाशक – मोतीलाल बनारसीदास, वाराणसी

2.   हितोपदेश (मित्रलाभ) – प्रकाशक – मोतीलाल बनारसीदास, वाराणसी

3.   वैदिक साहित्य और संस्कृति – आचार्य बलदेव उपाध्याय

4.   संस्कृत साहित्य का इतिहास – आचार्य बलदेव उपाध्याय

5.   संस्कृत साहित्य का अभिनव इतिहास – डा. राधावल्लभ त्रिपाठी, वि.वि. प्रकाशन, सागर, म.प्र.

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.

अपना
11·06·18

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.

सूची
11·06·18

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

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नवीन संशोधित पाठ्यक्रम

दर्शन शास्त्र

__बी.ए. भाग–एक,__ दर्शन शास्त्र में दो प्रश्न पत्र (75 अंक) के होंगे

</div>

1.   भारतीय दर्शन की रूपरेखा

2.   पाश्चात्य दर्शन का इतिहास

प्रत्येक प्रश्न पत्र पांच इकाईयों में विभाजित है । प्रत्येक इकाई में से एक प्रश्न हल करना अनिवार्य होगा ।

<div align="center">

बी.ए. भाग – एक

दर्शन शास्त्र

प्रथम – प्रश्न पत्र

भारतीय दर्शन की रूपरेखा

</div>

इकाई–1   1. भारतीय दर्शन – परिचय एवं मुख्य विशेषताएं

2. वेद एवं उपनिषद– ब्रह्म , आत्मा

3. चार्वाक दर्शन – तत्व मीमांसा

इकाई–2   1. जैन दर्शन – स्याद्वाद, जीव, बंधन एवं मोक्ष

2. बौद्ध दर्शन– चार आर्यसत्य, अनात्मवाद

इकाई–3   1. न्याय दर्शन – प्रमाण (प्रत्यक्ष एवं अनुमान), ईश्वर

2. वैशेषिक दर्शन– परमाणुवाद, सप्त पदार्थ

इकाई–4   1. सांख्य दर्शन – प्रकृति , पुरूष, विकासवाद

2. योग दर्शन – अष्टांग योग, ईश्वर

इकाई–5   1. शंकराचार्य का अद्वैत दर्शन– ब्रह्म, आत्मा, माया

2. रामानुज का विशिष्टाद्वैत – ब्रह्म, जीव, मोक्ष

उपरोक्त समस्त संशोधन विषय की स्पष्टता व ज्ञानवर्धन को ध्यान में रखकर समिति के सभी सदस्यों की सहमति से किया गया ।

<u>नवीन संशोधित पाठ्यक्रम</u>

बी.ए. भाग – एक

दर्शन शास्त्र

द्वितीय – प्रश्न पत्र

पाश्चात्य दर्शन का इतिहास

इकाई–1   1. पाश्चात्य दर्शन – परिचय

              2. प्लेटो– प्रत्ययों का सिद्धांत

              3. अरस्तू– कारणता का सिद्धांत

इकाई–2   1. थामस एक्वीनास– ईश्वर के अस्तित्व के प्रमाण

              2. डेकार्ट– संदेह पद्धति, आत्मा का अस्तित्व, ईश्वर का अस्तित्व

इकाई 3.   1. स्पिनोजा – द्रव्य, गुण, पर्याय

              2. लाइबनित्ज– चिद्बिन्दुवाद

इकाई–4   1. जॉन लॉक– सहज प्रत्ययों का खंडन, मूलगुण एवं उपगुण

              2. जॉन बर्कले – मूलगुण एवं उपगुण का खंडन, विज्ञानवाद

इकाई–5   1. ह्यूम– संस्कार और प्रत्यय, संदेहवाद, आत्मा का खंडन

              2. कांट – समीक्षावाद

उपरोक्त समस्त संशोधन विषय की स्पष्टता व ज्ञानवर्धन को ध्यान में रखकर समिति के सभी सदस्यों की सहमति से किया गया ।

P S Y C H O L O G Y

Paper	Name of the Paper	Max. Marks	Duration
I	Basic Psychological Processes	50	3 hrs.
II.	Psychopathology	50	3 hrs.
III.	Practicum	50	4 Hrs.

PAPER - I

BASIC PSYCHOLOGICAL PROCESSES (Paper Code-0119)   **M.M.:50**

Note: This paper consists of five units. From each unit a minimum of two questions would be set and the candidates would be required to attempt one from the each unit.

UNIT-1 Introduction: Definition and Goals of Psychology; Behaviouristic, Cognitive and Humanistic; Cross-cultural Perspectives. Methods: Experimental, Observational, Interview, Questionnaire, and Case study.

UNIT-2 Biological Basis of Behaviour: Genes and Behaviour, The Nervous System: The Central Nervous System (C.N.S.), The Autonomic Nervous System (A.N.S.) and The Peripheral Nervous System (P.N.S.); Glands and Hormones; Emotions- Types and Bodily changes (internal and external).

UNIT-3 Sensory and Perceptual Processes: Nature and Types of Sensation, Perception and Attention: Process, Definition, Types and Determinants; Principles of Perceptual Organization; Illusion: Nature and Types.

UNIT-4 Learning and Memory: Classical and Operant Conditioning- Basic Processes; Verbal and Observational Learning; Memory: Sensory (S.M.), Short-term (S.T.M.) and Long-term (L.T.M.); Forgetting: Process and Theories.

UNIT-5 Cognitive and Non-Cognitive Processes: Intelligence: Nature and Types; Motivation: Biogenic and Sociogenic Motives; Thinking Process: Nature and Types. Personality: Nature and Determinants; Approaches to study Personality: Trait and Type Approaches; Assessment of Personality.

References

1. सिंह, अरूण कुमार। स्नामान्य मनोविज्ञान। बनारसीदास प्रकाषन।
2. वमा, पाोति। आधुनिक स्नामान्य मनोविज्ञान।
3. Baron, R.A. & Byrne, D.A. Understanding Behavior. Tokyo: Halt Sounders.
4. Zimbardo, P.G. Psychology. New York: Haper Collings College publishers.
5. Lefton, L. A. (1985). Psychology. Bosten-Allyn
   Publishers. 6.Walser, A.L. (1997).

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B. A. - I

P S Y C H O L O G Y

PAPER- II

PSYCHOPATHOLOGY (Paper Code-0120)   **M.M.:50**

Note: This paper consists of five units. From each unit a minimum of two questions would be set and the candidates would be required to attempt one from the each unit.

UNIT-1 Introduction: The concept of Normality and Abnormality; Models of Psychopathology: Psychodynamic, Behavioral and Cognitive.

UNIT-2 Assessment of Psychopathology: Diagnostic Tests, Rating Scales, Clinical Interview, and Projective Tests.

UNIT-3 Anxiety Disorders: Panic Disorder, Phobias, Obsessive Compulsive Disorder (OCD), and Generalized Anxiety Disorder (GAD).

UNIT-4 Mood Disorders: Manic-Depressive Episode and Dysthemia; Personality Disorders: Paranoid, Schizoid, and Dependent Personality Disorder, Dissociative disorder and Obesity.

UNIT-5 Management of Psychopathology: Stress Management; Medico and Psychosocial Therapy: Shock Therapy, Psychoanalysis, Group therapy and Behavior therapy.

References

1. Lamm, A. (1997). Introduction to Psychopathology. NY: Sage.
2. Buss, A. H. (1999). Psychopathology. NY: John Wiley.
3ण सिंह तथा तिवारी। असामान्य मनोविज्ञान। आगराः विनोद पुस्तक भंडार।
4ण कपिल, एच. क । असामान्य मनोविज्ञान। आगराः हरप्रसाद भार्गव।

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B. A. – I

P S Y C H O L O G Y

PAPER- III

PRACTICUM   M.M.:50

Note: This paper consists of two parts:
Part-A

(a)   Comprises of Laboratory **Experiments**.
(b)   Comprises of Psychological **Testing** and understanding of self and others.

(a) **Experiments-** (Any five of the following) :-

(i) Effect of Set on Perception
(ii) Effect of Frustration on Performance.
(iii) Division of Attention.
(iv) Learning Curve/ Serial Position Curve.
(v) Retroactive Inhibition (RI).
(vi) S.T.M.
(vii) Concept Formation.
(vii) Judgment of Emotions through Facial Expressions.
(ix) Personality Test

(b) **Psychological Tests** (Any four of the following)

(i)   Verbal/ Nonverbal Intelligence Test/ Performance Tests.

(ii) E.P.I./ Personality   (iii) Anxiety test.

(iv) Depression Scale   (v) Adjustment Inventory.

(vi) Achievement motivation.   (vii) Stress Tolerance Test.

Part-B

   Anecdotal Record: Each student will be required to observe the behaviour of pupil in different setting and select an anecdote to understand, judge and narrate it as objectively as possible, so as to reveal his/her psychological insight existing in that anecdotal behavior. This record constitutes a part of psychological assessment of the students. Introduction to the measures of central tendency and graphical presentation of the ungrouped data.

Distribution of Marks

A.	Conduction of Psychological Experiment and Reporting	-	15 Marks
B.	Administration of one Psychological Test and Reporting	-	15 Marks
C.	Evaluation of Practical notebook and Anecdotal record	-	10 Marks
D.	Viva-voce	-	10 Marks

Note : No candidate will be allowed to appear in the practical examination unless his/her day-to-day practical work and the report are found satisfactory.

References Choubey, A. (2015). Psycho-lab- Experiment and Test. Raipur: Vaibhav Prakshan.

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संशोधित पाठ्यक्रम – बी.ए. प्रथम वर्ष के अंतर्गत
विषय – नृत्य (भरत नाट्यम)

बी.ए. भाग (1) के लिये इस विषय में प्रायोगिक और सैद्धांतिक दो भाग होंगें। प्रायोगिक 50 अंक एवं सैद्धांतिक 100 अंक का होगा। इस हेतु 50–50 अंक के दो प्रश्नपत्र होंगें। प्रत्येक वर्ष के पूर्णांक कुल मिलाकर 150 अंक के होगें।

क्र	विवरण		पूर्णांक	उत्तीर्णांक
1	सैद्धांतिक प्रथम प्रश्न पत्र	–	50	17
2	सैद्धांतिक द्वितीय प्रश्न पत्र	–	50	17
3	प्रायोगिक	–	50	17
		योग	150	51

सैद्धांतिक (विस्तृत पाठ्यक्रम)
प्रथम प्रश्न पत्र
शीर्षक – नृत्य का इतिहास एवं सामान्य अध्ययन
पेपर कोड (0153)

1.	नृत्य का इतिहास	–	सिंधु सभ्यता, वैदिक काल, रामायण एवं महाभारत काल में नृत्य की स्थिति।
2.	पुराणों के आधार पर	–	उमाशकर एवं नटवर श्री कृष्ण की नृत्य संबंधी कथायें – त्रिपुरडाह, उमा तांडव, मोहिनी–भस्मासुर, माखन लीला, कालिया दमन, रासलीला।
3.	नृत्य का अन्य ललित कलाओं से संबंध	–	संगीत, साहित्य, चित्रकला एवं मूर्तिकला से संबंध।
4.	नाट्य की उत्पत्ति कथा	–	भारत के नाट्यशास्त्र के प्रथम अध्याय में वर्णित।
5.	लोकधर्मी नाट्य परंपरा	–	निम्न की संक्षिप्त जानकारी –

1. रामलीला   2. रासलीला
3. भवाई   4. माच

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सैद्धांतिक (विस्तृत पाठ्यक्रम)

द्वितीय प्रश्न पत्र

शीर्षक – शास्त्रीय नृत्य सिद्धान्त

पेपर कोड (0154)

</div>

1. ताल की प्रांरभिक जानकारी   –   1. ताल के दस प्राण।

                                        2. लय – विलंबित, मध्य एवं द्रुत लय।

2. संक्षिप्त जीवन परिचय   –   भरत मुनि, आचार्य नंदिकेश्वर।

3. नृत्य के अभ्यास से शारीरिक एवं मानसिक लाभ।

4. भारतीय नाट्य परंपरा में गुरूवंदना का महत्व।

5. छत्तीसगढ़ी नृत्यों का सामान्य   –   1. करमा   2. ददरिया

    परिचय   3. सुवा   4. रीना, परब

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प्रायोगिक

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1. मौखिक मुद्रा प्रदर्शन   –   (अभिनय दर्पण के अनुसार)

                                (1) शिवस्तुति (2) शिरोभेद (3) ग्रीवाभेद

                                (4) दृष्टिभेद (5) असंयुक्त हस्त (6) संयुक्त हस्त

2. कार्यक्रम विभाग   –   (1) शारीरिक अभ्यास

                          (2) आरंभिक –05 अड़ऊ भेद

                              (पद + हस्त संचालन तीन काल में)

                          (3) पूजा नृत्य

                          (4) अलारिपु (तिस्रजाति)

MATHEMATICS

There shall be three compulsory papers. Each paper of 50 marks is divided into five units and each unit carry equal marks.

B.A. Part-I
MATHEMATICS
PAPER - I
ALGEBRA AND TRIGONOMETRY

UNIT-I Elementary operations on matrices, Inverse of a matrix. Linear independence of row and column matrices, Row rank, column rank and rank of a matrix. Equivalence of column and row ranks. Eigenvalues, eigenvectors and the characteristic equations of a matrix. Cayley Hamilton theorem and its use in finding inverse of a matrix.

UNIT-II Application of matrices to a system of linear (both homogeneous and nonhomogeneous) equations. Theorems on consistency of a system of linear equations. Relation between the roots and coefficients of general polynomial equations in one variable. Transformation of equations. Descarte's rule of signs. Solutions of cubic equations (Cardons method), Biquadratic equation.

UNIT-III Mappings, Equivalence relations and partitions. Congruence modulo n. Definition of a group with examples and simple properties. Subgroups, generation of groups, cyclic groups, coset decomposition, Lagrange's theorem and its consequences. Fermat's and Euler's theorems. Normal subgroups. Quotient group, Permutation groups. Even and odd permutations. The alternating groups An. Cayley's theorem.

UNIT-IV Homomorphism and Isomorphism of groups. The fundamental theorems of homomorphism. Introduction, properties and examples of rings, Subrings, Integral domain and fields Characteristic of a ring and Field.

TRIGONOMETRY :

UNIT-V De-Moivre's theorem and its applications. Direct and inverse circular and hyperbolic functions. Logarithm of a complex quantity. Expansion of trigonometrical functions. Gregory's series. Summation of series.

TEXT BOOK :
1. I.N. Herstein, Topies in Algebra, Wiley Eastern Ltd., New Delhi, 1975
2. K.B. Datta, Matrix and Linear Algebra, Prentice Hall of India Pvt. Ltd.New Delhi, 2000.
3. Chandrika Prasad, Text-Book on Algebra and Theory of equations, Pothishala Private Ltd., Allahabad.
4. S.L. Loney, Plane Trigonometry Part II, Macmillan and Company, London.

REFERENCES :
1. P.B. Bhattacharya, S.K. Jain and S.R. Nagpaul, First Course in linear Algebra, Wiley Eastern, New Delhi, 1983.
2. P.B. Bhattacharya, S.K.Jain and S.R. Nagpaul, Basic Abstract Algebra (2 edition), Cambridge University Press, Indian Edition, 1997.
3. S.K. Jain, A. Gunawardena and P.B. Bhattacharya, Basic linear Algebra with MATLAB, Key College Publishing (Springer-Verlag), 2001.
4. H.S. Hall and S.R. Knight, Higher Algebra, H.M. Publications, 1994.
5. R.S. Verma and K.S. Shukla, Text Book on Trigonometry, Pothishala Pvt. Ltd., Allahabad.

B.A. Part-I

MATHEMATICS
PAPER - II
CALCULUS

DIFFERENTIAL CALCULUS :

UNIT-I $\varepsilon - \delta$ definition of the limit of a function. Basic properties of limits. Continuous functions and classification of discontinuties. Differentiability. Successive differentiation. Leibnitz theorem. Maclaurin and Taylor series expansions.

UNIT-II Asymptotes. Curvature. Tests for concavity and convexity. Points of inflexion. Multiple points. Tracing of curves in cartesian and polar coordinates.

INTEGRAL CALCULUS:

UNIT-III Integration of transcendental functions. Reduction formulae. Definite integrals. Quadrature. Rectification. Volumes and surfaces of solids of revolution.

ORDINARY DIFFERENTIAL EQUATIONS :

UNIT-IV Degree and order of a differential equation. Equations reducible to the linear form. Exact differential equations. First order higher degree equations solvable for x, y, p. Clairaut's form and singular solutions. Geometrical meaning of a differential equation. Orthogonal trajectories. Linear differential equations with constant coefficients. Homogeneous linear ordinary differential equations.

UNIT-V Linear differential equations of second order. Transformation of the equation by changing the dependent variable/the independent variable. Method of variation of parameters. Ordinary simultaneous differential equations.

TEXT BOOK :

1. Gorakh Prasad, Differential Calculaus, Pothishala Private Ltd. Allahabad.
2. Gorakh Prasad, Integral Calculus, Pothishala Private Ltd. Allahabad.
3. D.A. Murray Introductory Course in Differential Equations, Orient Longman (India), 1976.

REFERENCES :

1. Gabriel Klambauer, Mathematical Analysis, Marcel Dekkar, Inc. New York, 1975.
2. Murray R. Spiegel, Theory and Problems of Advanced Calculus, Schaum's outline series, Schaum Publishing Co. New York.
3. N. Piskunov, Differential and Integral Calculus, Peace Publishers, Moscow.
4. P.K. Jain and S.K. Kaushik, An Introduction to Real Analysis, S. Chand & Co. New Delhi, 2000.
5. G.F. Simmons, Differential Equations, Tata Mc Graw Hill, 1972.
6. E.A. Codington, An Introduction to Ordinary Differential Equations, Prentics Hall of India, 1961.
7. H.T.H. Piaggio, Elementary Treatise on Differential Equations and their Applications, C.B.S. Publishe & Distributors, Dehli, 1985.
8. W.E. Boyce and P.O. Diprima, Elementary Differential Equations and Boundary Value Problems, John Wiley, 1986.
12. Erwin Kreysizig, Advanced Engineering Mathematics, John Wiley and Sons, 1999.

B.A. Part-I
MATHEMATICS
PAPER - III
VECTOR ANALYSIS AND GEOMETRY

VECTOR ANALYSIS :

UNIT-I   Scalar and vector product of three vectors. Product of four vectors. Reciprocal Vectors. Vector differentiation. Gradient, divergence and curl.

UNIT-II   Vector integration. Theorems of Gauss, Green, Stokes and problems based on these.

UNIT-III   General equation of second degree. Tracing of conics. System of conics. Confocal conics. Polar equation of a conic.

UNIT-IV   Sphere. Cone. Cylinder.

UNIT-V   Central Conicoids. Paraboloids. Plane sections of conicoids. Generating lines. Confocal Conicoids. Reduction of second degree equations.

TEXT BOOKS :

1. N. Saran and S.N. Nigam, Introduction to vector Analysis, Pothishala Pvt. Ltd. Allahabad.
2. Gorakh Prasad and H.C. Gupta, Text Book on Coordinate Geometry, Pothishala Pvt. Ltd., Allahabad.
3. R.J.T. Bell, Elementary Treatise on Coordinate Geometry of three dimensions, Machmillan India Ltd. 1994.

REFERENCES :

1. Murray R. Spiegel, Theory and Problems of Advanced Calculus, Schaum Publishing Company, New York.
2. Murray R. Spiegel, Vector Analysis, Schaum Publishing Company, New York.
3. Erwin Kreysizig, Advanced Engineering Mathematics, John Wiley & Sons, 1999.
4. Shanti Narayan, A Text Book of Vector Calculus, S. Chand & Co., New Delhi.
5. S.L. Loney, The Elements of Coordinate Geometry, Macmillan and Company, london.
6. P.K. Jain and Khalil Ahmad, A Text Book of Analytical Geometry of two Dimensions, Wiley Eastern Ltd., 1994.
7. P.K. Jain and Khalil Ahmad, A Text Book of Analytical Geometry of three Dimensions, Wiley Eastern Ltd., 1999.
8. N. Saran and R.S. Gupta, Analytical Geometry of three Dimensions, Pothishala Pvt. Ltd. Allahabad.

B.A./B.Sc. –I
Subject-Statistics
Paper – I (Paper Code-0803)
PROBABILITY THEORY

Unit-I
Important concepts in probability: Random experiment: trial, sample point and sample space, event, Operations of events, concepts of mutually exclusive and exhaustive events. Definition of probability: classical and relative frequency approach. Richard Von Misses, Cramer and Kolmogrove approachesto probability, merits and demerits to these approaches, any general idea to be given. Discrete probability space, Properties of probability based on axiomatic approaches, Independence of events, Conditional probability, total and compound probability rules, Baye's theorem and its applications.

Unit-II
Random variables: Definition of discrete random variable (rv); probability mass function (pmf) and cumulative distribution function (cdf). Joint pmf of several discrete rvs. Marginal and conditional pmfs. Independence of rvs. Idea of continuous random variables, probability density function, illustration of random variables and its properties. Expectation of a random variable and its properties -moments, measures of location and dispersion, skewness and kurtosis, Moment generating function, raw and central moments, Probability generating function (pgf) and, their properties and uses.

Unit-III
Standard univariate discrete distributions: degenerate, discrete uniform, hypergeometric, Poisson, geometric and negative binomial distributions. Marginal and conditional distributions, Distributions of functions of discrete rvs, reproductive property of standard distributions.

Unit-IV
Univariate continuous distributions and their properties: Uniform, Beta, Gamma, Exponential, Normal, Cauchy, Lognormal. Moment generating function (mgf) : its properties and applications.
Tchebycheff's inequality and applications, statements and applications of weak law of large numbers and central limit theorems.

Unit-V
 Four short notes, one from each unit will be asked. Students have to answer any two.

REFERENCES
1. Bhat B.R.,Srivankataramana T. and Rao Madhav K.S. (1997): Statistics; A Beachners Vol. II, New Age International (P) Ltd.
2.Chung, K.L. (1979). Elementary Probability Theory with Stochastic Processes, Springer International Student Edition.
3. Edward P.J., Ford J.S. and Lin (1974): Probability for Statistical Decision-Marketing. Prentice Hall
4. Goon A.M., Gupta M.K. and Dasgupta B.(1999): Fundamentals of Statistics, Vol. I , World Press, Calcutta
5. Mood A.M., Grabill F.A. and Bose D.C.(1974): Introduction to the theory of Statistics, Mc. Graw Hall.

ADDITIONAl REFERENCES:
6. Cook, Cramer and Clark (): Basic Statistical Computing, Chapman and Hall.
7.David Stirzaker (1994). Elementary Probability, Cambridge University Press.
8.Feller, W. (1968). An Introduction to Probability Theory and its Applications, Wiley.
9. Hoel P.G. (1971): Introduction to Mathematical Statistics
10. Mayer P.L. (1970): Introductory Probability and Statistical Applications, Addition Wesley
11.Mukhopadhyay, P. (1996). Mathematical Statistics, New Central Book Agency, Calcutta.
12.Parzen, E. (1960). Modern Probability Theory and its Applications, Wiley Eastern.
13Pitman, Jim (1993). Probability, Narosa Publishing House.

Paper – II(Paper Code-0804)
DESCRIPTIVE STATISTICS

Unit - I

Origin and Development of statistical importance, uses and limitations of Statistics. Types of Data: Concepts of a statistics population and sample from a population; qualitative and quantitative data; nominal and ordinal data; cross sectional and time series data; discrete and continuous data; frequency and non-frequency data.

Collection and Scrutiny of Data; Primary data – designing a questionnaire and a schedule; checking their consistency. Secondary data – their major sources including some government publications. Complete enumeration, controlled experiments, observational studies and sample surveys. Scrutiny of data for internal consistency and detection of errors of recording. Ideas of cross-validation.

Presentation of Data: Construction of tables with one or more factors of classification. Diagrammatic and graphical representation of non-frequency data. Frequency distributions, cumulative frequency distributions and their graphical and diagrammatic representation – column diagram, histogram, frequency polygon and ogives. Stem and leaf chart. Box plot.

Unit -II

Analysis of Quantitative Data: Univariate data: Concepts of central tendency or location, and their measures; arithmetic, geometric and harmonic mean, median and mode.

Unit -III

Dispersion and relative measures of dispersion, skewness and kurtosis, and their measures including those based on quartiles and moments. Sheppard's corrections for moments for grouped data (without deviation).

Unit -IV

Bivariate data: Scatter diagram. Product moment correlation coefficient and its properties. Coefficient of determination. Correlation ratio. Concepts of regression. intra-class correlation coefficient with equal and unequal group sizes. Rank correlation – Spearman's and Kendall's measures. Correlation index. Principle of least squares. Fitting of linear and quadratic regression and related results.   Fitting

of curves reducible to polynomials by log and inverse transformation. Multivariate data: Multiple regression, multiple correlation and partial correlation in 3 variables. Their measures and related results.

Unit V
  Four short notes, one from each unit will be asked. Students have to answer any two.

REFERENCES
1. Bhat B.R.,Srivankataramana T. and Rao Madhav K.S. (1997): Statistics; A Beachners Vol. II, New Age International (P) Ltd.
2.Croxton FE, Cowden DJ and Klein S: Applied General Statistics (1973): Prentice Hall of India.
3.Goon A.M., Gupta M.K., Dasgupta B. Fundamentals of Statistics, Vol. 1(1991) & Vol. 2(2001). World Press, Calcutta.
5.Gupta V.K. and Kapor S.C. : Fundamentals of Mathematical Statistics S. Chand and Sons.
ADDITIONAl REFERENCES:
 6.Cook, Cramer and Clark (): Basic Statistical Computing, Chapman and Hall.
7. Mood A.M., Grabill F.A. and Bose D.C.(1974): Introduction to the theory of Statistics, McGraw Hill.
8.Snedecor GW and Cochran WG: Statistical Methods (1967) : Lowa State University Press.
9.Spiegel, MR (1967): Theory & Problems of Statistics (1967): Schaum's Publishing Series.

Paper III:
Practical : Practicals Based on Paper I & II
1. Presentation of data by Frequency tables, diagrams and graphs.
2. Calculation of Measures of Central Tendency, dispersion , skewness and kurtosis
3. Product Moment Correlation and Correlation Ratio
4. Fitting of Curves by the least square method
5. Regression of two variables
6. Spearman's Rank correlation Coefficient
7. Multiple regression of three variables
8. Multiple correlation and partial correlation
9. Evaluation of probabilities using addition and multiplication theorems, conditional probabilities and Bayes theorems
10. Exercises on mathematical expectations and finding measures of central tendency, dispersion, skewness and kurtosis of univariate probability distributions
11. Fitting of univariate and conditional distributions