

### Course outcomes (English)

B.A. (English) CO1 'Poetry' contains forms of poetry, stanza forms and representative poet of each age.

B.A. (English) CO2 'Prose' is related with the essayist of different age. Suggestion: forms of essay should be introduced.

B.A. (English) CO3 'Drama' has the following syllabus 1. Othello by Shakespeare. 2. Way of the world, by William Congreve. 3. Candida by Bernard Shaw.

B.A. (English) CO4 'Fiction' has the following syllabus 1. Pride and Prejudice by Jane Austen 2. David Copperfield by Charles Dickens. 3. Return of the Native by Thomas Hardy.

B.A. (English) CO5 (History of English Literature, is described in detail.)

B.A. (English) CO6 (A) Indian writing in English (B) seven steps Around the fire by 'Mahesh Dattani (C) Untouchable by Mulk Raj Anand. Suggestion 'a' part contains only prose and poetry, drama and novel should be added.

B.A. (English) CO7 New literature in English', 3rd paper (a) prose and poetry (b) The zoo story (c) Bodily Harms

M.A. (English) CO1 Prose contains the essays written by Francis Bacon, Charles Lamb, Addison and Steele, A.G. Gardiner, William Hazlitt, Aldus Huxley, Thomas Carlyle and George Orwell.

M.A. (English) CO2 Poetry contains the poems written by Chaucer, John Milton, John Donne, Thomas Gray, Spenser, Alexander Pope, Andrew Marvell, William Blake.

M.A. (English) CO3 Drama contains the plays written by Christopher Marlowe, Shakespeare, G.B. Shaw, Webster, Goldsmith, T.S. Eliot and Harold Pinter.

M.A. (English) CO4 Fiction contains novels written by Henry Fielding, Sir Walter Scott, Jane Austen, Charles Dickens, Thomas Hardy, Virginia Woolf, E.M. Forster and J. Conrad.

M.A. (English) CO5 Nineteenth Century English Poetry has the relevant and important poems written by John Keats, William Wordsworth, Tennyson, Robert Browning, P.B. Shelley, S.T. Coleridge, Matthew Arnold and E. Fitzgerald.

M.A. (English) CO6 Twentieth Century English Literature has famous poems, dramas and novels written by T.S. Eliot, W.B. Yeats, W.H. Auden, Philip Larkin, S. Beckett, Graham Greene, W. Golding and D.H. Lawrence.

M.A. (English) CO7 Literary Critics seven critics are prescribed, they are as follows: Aristotle, Longinus, Philip Sidney, Dryden, Wordsworth, Arnold, T.S. Eliot. In new criticism three modern critical theories are prescribed (a) Structuralism (b) Psycho-analytical criticism (c) Construction.

M.A. (English) CO8 (a) part is prescribed, i.e. History of English Literature, it has the survey of English literature from Chaucer to the present day with special focus on ages and movements. (b) In 'American Literature' the following American poets are prescribed: Walt Whitman, Emily Dickinson, Robert Frost, Carl Sandberg, Eugene O' Neill, Arthur Miller, Henry James, Ernest Hemingway and William Faulkner.

### Programme outcomes (English)

B.A. (English) PO1 For it, basic knowledge of English grammar and translation are needed and 40% marks should be in the concerned subject English literature and in aggregate also.

M.A. (English) PO1 Formation 45% marks are needed in subject and also in aggregate. These students are also able to apply for most of the jobs as they are related with English skills both oral and written.

### Programme specific outcomes (English)

B.A. (English) PSO1 For every job, for every short-term diploma or degree they are mentally prepared as most of the courses are in English. With sentence construction, grammar also enhance their power of correctness in writing C.V., application, essays, précis writing and report writing etc.

M.A. (English) PSO1 They are not only eligible for each competition but are able to get through in most of the competition due to their grasping power in oral and written English. They are able to understand and teach all subjects as their grammar is improved and corrected in B.A. I and II, they know to apply as they have already practiced C.V. Writing etc at B.A. Level.

## Course outcomes (Physics)

B.Sc. (Physics) CO1 Mechanics and wave motion: Basic of the mechanical system and understanding of planetary system and wave propagation.

B.Sc. (Physics) CO2 Kinetic theory and thermodynamics: description of thermodynamics systems and black body radiation.

B.Sc. (Physics) CO3 Circuit fundamentals and Basic Electronics: Gives a basic knowledge of semiconductors and semiconductor devices.

B.Sc. (Physics) CO4 Physical optics and Lasers: Gives knowledge of Interference of light, Diffraction of light and polarization of light and characteristics of laser lights and its uses.

B.Sc. (Physics) CO5 Electromagnetics: Gives a knowledge about E-M waves, their composition and their advantages.

B.Sc. (Physics) CO6 Element of Quantum mechanics, Atomic and Molecular spectra in this basic of Q. mech. And basics of atomic & molecular spectra are included.

B.Sc. (Physics) CO7 Relativity and Statistical Physics: Consequence of Einstein theory of relativity and statistical mechanics gives quantum information of thermodynamics.

B.Sc. (Physics) CO8 Solid state and nuclear physics: Gives a knowledge crystal structure and structure of nucleus, radioactivity, nuclear reactions, accelerators, detectors and elementary particles.

B.Sc. (Physics) CO9 Solid state electronics: Describes the application of solid state electronics, e.g. transistor, LED, Amplifiers etc.

M.Sc. (Physics) CO1 Mathematical physics and classical mechanics: Basic of mathematical physics and classical physics, Language equation; Ha Milton equation.

M.Sc. (Physics) CO2 Spectroscopy and Quantum mechanics: Describe Atomic spectra, molecular spectra, Infrared and Raman spectra, Electronic state and electronic transitions, Zeeman effect and stark effect.

M.Sc. (Physics) CO3 Advanced solid state physics: Describe crystal diffraction, Reciprocal lattice, Crystal binding, point defect, elastic constant and elastic waves photon and Lattice vibration, free e-Fermi gas, magnetism, LASER and MASER NMR, ESR, Mossbauer effect, superconductivity.

M.Sc. (Physics) CO4 Electronics and Electrodynamics: Classify Network theorems semiconductor devices, power supply, power amplifiers, JFET, MOSFET, E-M field equations and electrostatics of moving charge.

M.Sc. (Physics) CO5 Advanced Quantum Mechanics: Describes time dependent perturbation theory, scattering theory, relativistic equations, occupation number representation and quantization of fields, interacting field and Feynman diagrams.

M.Sc. (Physics) CO6 Nuclear Physics and Particle Physics: Describes basic properties of Atomic nucleus, Nuclear models, two body problem and nuclear force, nuclear transformations, accelerations and nuclear reactions.

M.Sc. (Physics) CO7 Advanced electronic: Classify transmission lines, Antenna, propagation of Radiowaves, modulation and detection. TV and radar, High frequency Amplifier, microwaves

M.Sc. (Physics) CO8 Operational and Amplifier microprocessor and Digital Electronics: Describes Op. Amp. Microprocessor, Digital, Flip-Flop, register, counter and memories

### Programme outcomes (Physics)

B.Sc. (Physics) PO1 Understand the mechanical system, planetary motion thermodynamical system, black body radiation and basic knowledge of semiconductor devices.

B.Sc. (Physics) PO2 Communicate the effective knowledge of properties of light, laser and its uses, E-M theory and its uses, and basic of quantum mechanics, atomic and molecular spectra.

B.Sc. (Physics) PO3 Gives a knowledge of Einstein theory of relativity, crystal structure, the structure of the nucleus, radioactivity, elementary particles, detectors and accelerators and application of solid state electronics like LED, Transistor, Amplifier, Oscillator etc.

M.Sc. (Physics) PO1 Communicate the effective knowledge of Lagrange equation, Hamilton equation, Group theory, Atomic & molecular spectra, perturbation theory.

M.Sc. (Physics) PO2 Understand crystal structure, magnetism, LASER and MASER, NMR, ESR Mossbauer effect, superconductivity and semiconducting devices power supply, power amplifier, JFET and MOSFET and Electro dynamics.

M.Sc. (Physics) PO3 Gives a knowledge of scattering theory, Feynman's diagram, Atomic nucleus, Nuclear models, elementary particles, accelerator, transmission lines

modulation and detection, T.V., Radar, Op.Amp, Microprocessor, flip-flap and memories.

### Programme specific outcomes (Physics)

- B.Sc. (Physics) PSO1 Understand the basic physics behind any natural phenomenon.
- B.Sc. (Physics) PSO2 Electrical appliances can be maintained by Electrician this course imparts basic knowledge.
- B.Sc. (Physics) PSO3 Competitive exam preparation can be done.
- M.Sc. (Physics) PSO1 Minimum Qualification of Radiation officer in medical colleges after a course from BARC Mumbai.
- M.Sc. (Physics) PSO2 Can apply for NET/SLET/GATE etc.
- M.Sc. (Physics) PSO3 Teaching profession is open for all meritorious students.

### Course outcomes (Botany)

- B.Sc. (Botany) CO1 Diversity of viruses, Bacteria & fungi. This paper includes different types of Bacteria, Fungi & Viruses.
- B.Sc. (Botany) CO2 Diversity of Algae, Lichens & Bryophytes. This paper includes study of Algae, Lichens & Bryophytes.
- B.Sc. (Botany) CO3: Diversity of Pteridophytes & Gymnosperms- This paper includes study of Pteridophytes & Gymnosperms.
- B.Sc. (Botany) CO4 Diversity of Angiosperms: Systematic, Development & Reproduction. It includes flowering plants, classification & Embryology.
- B.Sc. (Botany) CO5 Cytology, Genetics, Evolution & Ecology- It includes cell organelles, chromosome, evolution and ecology.
- B.Sc. (Botany) CO6 Plant Physiology & Biochemistry- It includes physiology & biochemistry of plants.
- B.Sc. (Botany) CO7 Plant resource utilization, Palynology & Biostatistics.- It includes plant importances, pollen details etc.

B.Sc. (Botany) CO8 Molecular Biology & Biotechnology- It includes DNA, RNA Replication, regulation & biotechnology etc.

B.Sc. (Botany) CO9 Environmental Botany & Plant Pathology- It includes pollution of different types, environment, pathology etc.

M.Sc. (Botany) CO1 Phycology & Microbiology- study of Algae & microbes.

M.Sc. (Botany) CO2 Mycology & Plant Pathology- study of fungi & disease.

M.Sc. (Botany) CO3 Bryophyta, Pteridophytes & Gymnosperms- study of Bryophyta, Pteridophytes & Gymnosperms.

M.Sc. (Botany) CO4 Plant Physiology and Crop physiology- Physiology of plant.

M.Sc. (Botany) CO5 Cytology and Molecular Biology- Cell organelles, DNA, RNA, Replication.

M.Sc. (Botany) CO6 Taxonomy, Economic Botany & Morphogenesis- Taxonomy, importance of plants.

M.Sc. (Botany) CO7 Morphology, Anatomy, Embryology & tissue culture- Cellular structure, embryology, tissue culture.

M.Sc. (Botany) CO8 Ecology & Soil Science- Ecology & Soil.

M.Sc. (Botany) CO9 Biochemistry & Photobiology- Biochemistry & Photobiology of plants.

M.Sc. (Botany) CO10 Genetics, Plant breeding & Biostatistics- Genetics, breeding & Biostatistics of plants.

### Programme outcomes (Botany)

B.Sc. (Botany) PO1 Understand the plants- Algae, Fungi, Bryophytes, Pterodophytes, Gymnosperms.

B.Sc. (Botany) PO2 Understand Viruses, Bacteria, Mycoplasma and other micro-organisms.

B.Sc. (Botany) PO3 Give knowledge of flowering plants and its importance to human life.

B.Sc. (Botany) PO4 Give practical knowledge of Genetics, Biotechnology, Cytology, Angiospermic plants, Molecular Biology etc.

M.Sc. (Botany) PO1 Communicate the effective knowledge of plant physiological processes- photosynthesis, Respiration, Transpiration, Guttation etc.

M.Sc. (Botany) PO2 Give knowledge of practical of Biostatistics, Bioinformatics, physiological processes, ecological, etc. that very important for industrial job.

M.Sc. (Botany) PO3 Give very detailed knowledge of all types of plants i.e. Algae, Fungi, Gymnosperms, Angiosperms, Pteridophytes, Bryophytes, Viruses, Bacteria, Mycoplasma.

### Programme specific outcomes (Botany)

B.Sc. (Botany) PSO1 Many competitive examinations can be done after UG.

B.Sc. (Botany) PSO2 Understand basics of plants and apply in many industries of Agricultures, fertilizers etc.

B.Sc. (Botany) PSO3 Knowledge of Genetics, Biotechnology, biostatistics, Cytology etc can help in many industries.

M.Sc. (Botany) PSO1 Minimum Qualification for Scientists in all over Indian Scientific Institutions related to Plant science/Botany

M.Sc. (Botany) PSO2 Can apply for NET/SLET/GATE etc. Lecturer in inter college etc.

M.Sc. (Botany) PSO3 Can apply for teaching posts in Degree/Inter Colleges/Universities.

### Course outcomes (Zoology)

B.Sc. (Zoology) CO1 Habits, morphology, life cycle of important invertebrates; classification, characteristics of important invertebrate Phyla.

B.Sc. (Zoology) CO2 Structure, anatomy of important invertebrates; Basic knowledge about reproduction of common invertebrates.

B.Sc. (Zoology) CO3 Detailed knowledge about cell structure and function; cell division; concepts of genetics; eugenics

B.Sc. (Zoology) CO4 Classification and affinity of different vertebrate Phyla; Habits, myphology of anatomy of important chordate belonging to different Phyla.

B.Sc. (Zoology) CO5 Geological time scale; Geographical distribution of animals; origin of life, evolution of animal; basic concepts of evolutions.

B.Sc. (Zoology) CO6 Elementary knowledge about physiology of digestion, respiration, circulation, excretion; basic concepts of biochemistry.

B.Sc. (Zoology) CO7 Structure and life cycles of important parasites, pest control, basics of animal breeding and culture; wild life of India.

B.Sc. (Zoology) CO8 Basics of biotechnology, genetics, Engineering and immunology; Biological tools and techniques; Elementary biostatistics.

B.Sc. (Zoology) CO9 Concepts of Ecology; Basic microbiology; concepts of animal behaviour; knowledge about pollution and toxicology.

M.Sc. (Zoology) CO1 Classification, characteristics and salient features of different Phyla of chordates; parasites and parasitic adaptation; larval forms of crustacea; economic importance of insects; pest control.

M.Sc. (Zoology) CO2 Detailed knowledge about cell structure and function; concept of genetics; data collection, analysis and uses of biostatistics.

M.Sc. (Zoology) CO3 Physiology of digestion respiration, excretion, osmoregulation, circulation and nerve impulse transmissions; basic biochemistry.

M.Sc. (Zoology) CO4 Knowledge about taxonomic rules, binomial classification; detailed knowledge about ecosystem; ecology, concept of evolution.

M.Sc. (Zoology) CO5 Classification and evolution of different Phyla of chordates; ostracoderms, placoderms; structure and affinity of fishes; gymnophiona, stegocephalia, dentition in mammals, aquatic adaptation; evolution of man.

M.Sc. (Zoology) CO6 Detailed knowledge of gastrulation, cleavage, amniogenesis and placentation, ageing and cellular death; concept of animal behaviour pheromones and their use in evolution.

M.Sc. (Zoology) CO7 Origin, classification and affinity of fishes; fish physiology, fish anatomy; viviparity in fishes; larvivorous fishes.

M.Sc. (Zoology) CO8 Fish breeding and culture, induced fish breeding; fish by products; problems of fish industry; preparation and maintenance of aquaria; Preservation and refrigeration of fishes.



## Programme outcomes (Zoology)

B.Sc. (Zoology) PO1 Habit, morphology, reproduction of selected invertebrate belonging to different invertebrate Phyla; structure of cell and cell division; elementary knowledge of genetics.

B.Sc. (Zoology) PO2 Classification, habit, morphology and physiology selected chordates belonging to different Phyla; elementary knowledge of animal distribution and evolution; basics of embryology; basics of physiology and biochemistry.

B.Sc. (Zoology) PO3 Elementary knowledge about structure and life cycles of parasites; vectors and pests; animal breeding and culture techniques; endangered species and wild life of India.

B.Sc. (Zoology) PO4 Basic biotechnology, immunology and genetic engineering. Different biological tools and techniques; concept of animal behaviour, pollution and toxicology.

M.Sc. (Zoology) PO1 knowledge about origin, classification and affinity of different invertebrate and vertebrate Phyla; knowledge about the task of zoologist, taxonomist and taxidermist.

M.Sc. (Zoology) PO2 Basics of physiology and biochemistry; knowledge about biological tools and techniques; knowledge about biostatistics and genetics.

M.Sc. (Zoology) PO3 Specified knowledge about fish culture, breeding, induced breeding; fish by products; fish processing and refrigeration.

## Programme specific outcomes (Zoology)

B.Sc. (Zoology) PSO1 Basics of laboratory techniques required for working in pathology. Knowledge required for breeding the animals in artificial medium.

B.Sc. (Zoology) PSO2 Knowledge about animal fauna of India, their habits and life cycle. Observation of animals in natural habitat; wild life of India and endangered species.

B.Sc. (Zoology) PSO3 Knowledge required for in vitro and in-vitro assay of toxicants; techniques required for working in toxicology lab.

M.Sc. (Zoology) PSO1 Knowledge of biological tools and techniques needed for technician in biology lab; techniques in lab of toxicology, immunology and cell biology.

M.Sc. (Zoology) PSO2 Basics training of technique in pathology; identification of blood cells and training for haematologist.

M.Sc. (Zoology) PSO3 Training for Apiculture (bee culture), Lac culture; training for fish farming and fish culture; Knowledge about marketing of fish.

## Course outcomes (Geography)

B.A. (Geography) CO1 भौतिक भूगोल— पृथ्वी की उत्पत्ति, महाद्वीप व महासागरों की उत्पत्ति तथा पृथ्वी के स्थलमण्डल, जल मण्डल, वायुमण्डल तथा जैवमण्डल का ज्ञान प्रदान करना

B.A. (Geography) CO2 मानव भूगोल— पृथ्वी पर मानव के उद्भव से लेकर वर्तमान समय तक मानव के क्रियाकलापों का ज्ञान प्रदान करना।

B.A. (Geography) CO3 आर्थिक भूगोल— मानव की विभिन्न आर्थिक क्रियाओं तथा उसके औद्योगिक क्रिया कलापों को समझाना।

B.A. (Geography) CO4 भारत का भूगोल— भारत देश की भूगर्भिक संरचना, जलवायु, मिट्टी, प्राकृतिक-वनस्पति उद्योग धन्धों, खनिज संसाधनों व जनसंख्या आदि पक्षों की विश्लेषण सम्पूर्ण जानकारी देना

B.A. (Geography) CO5 भौगोलिक विचारधारा— भूगोल के विकास क्रम को समझाना।

B.A. (Geography) CO6 पर्यावरण अध्ययन— मानव के चारों ओर फैले पर्यावरण, उसके तत्व और पर्यावरण के संघटकों के ज्ञान से परिचित कराना।

B.A. (Geography) CO7 सुदूर पूर्वी एशिया— पूर्वी एशिया के महाद्वीप के 2 देशों जापान और चीन के सम्पूर्ण भौगोलिक ज्ञान से छात्रों को परिचित कराना

M.A. (Geography) CO1 पृथ्वी, महाद्वीप, महासागरों की उत्पत्ति तथा पृथ्वी के धरातल पर मौजूद विभिन्न स्थलाकृतिया की निर्माण प्रक्रिया का सम्पूर्ण ज्ञान प्रदान कराना

M.A. (Geography) CO2 पृथ्वी तल पर उपस्थित समस्त संसाधनों के उत्पादन एवं वितरण सम्बन्धी सम्पूर्ण ज्ञान से परिचित कराना।

M.A. (Geography) CO3 पृथ्वी पर मानव के उद्भव, विश्व की समग्र जनसंख्या एवं जनसंख्या संसाधनों का विशद ज्ञान से परिचित कराना

M.A. (Geography) CO4 पृथ्वी के पर्यावरण के विभिन्न संघटकों तथा पारिस्थितिकी तथा पारिस्थितिक तंत्र में ऊर्जा प्रवाह, खाद्य श्रृंखला ऊर्जा पिरामिड, प्राकृतिक आपदायें व चरम घटनाओं की सम्पूर्ण जानकारी देना

M.A. (Geography) CO5 भूगोल के विकास क्रम को समझाना तथा भौगोलिक विधितन्त्र की सम्पूर्ण जानकारी प्रदान करना।

M.A. (Geography) CO6 भारत देश की भूगर्भिक संरचना, स्थिति एवं विस्तार, जलवायु, वनस्पति मिट्टी, उद्योग धन्धे कृषि, यातायात-साधन विदेशी व्यापार व भारत में निकाले जाने वाले खनिज संसाधनों के विशद ज्ञान से परिचित कराना

M.A. (Geography) CO7 पृथ्वी की जलवायु तथा जलवायु प्रदेशों तथा महासागरों, उच्चावच, महासागरीय ज्वार भाटा, घाटाये और समुद्री निक्षेपों का विशद ज्ञान से परिचित करना, मानव-वातावरण सम्बन्ध पर्यावरण का मानव पर प्रभाव तथा मानवीय क्रियाकलापों का पर्यावरण पर प्रभावों का छात्रों का ज्ञान कराना

### **Programme outcomes ( Geography)**

B.A. (Geography) PO1 पृथ्वी के जलमण्डल, स्थल मण्डल और वायुमण्डल तथा जैव मण्डल के उद्भव और पृथ्वी के धरातल मानवीय क्रिया कलापों के ज्ञान से परिचित

B.A. (Geography) PO2 मानव की विभिन्न आर्थिक क्रियाओं तथा भारत राष्ट्र के सम्पूर्ण क्षेत्रीय भौगोलिक ज्ञान से छात्रों को परिचित कराना।

B.A. (Geography) PO3 भूगोल विषय के विकास क्रम, पृथ्वी के पर्यावरण संघटकों का तथा चीन और जापान देश का क्षेत्रीय भौगोलिक ज्ञान से छात्रों को परिचित कराना

M.A. (Geography) PO1 उत्पन्न पृथ्वी की विभिन्न भू-आकृतियों की निर्माण-प्रक्रिया, विभिन्न भू-गर्भिक कालों में विशद ज्ञान प्रदान कराना।

M.A. (Geography) PO2 पृथ्वी तल पर उपस्थित समस्त प्रकार के संसाधनों उसकी उपयोगिता संसाधन प्रबन्धन एवं संरक्षण आदि का विशद ज्ञान से परिचय होना

M.A. (Geography) PO3 भूगोल विषय के ऐतिहासिक विकास क्रम, भौगोलिक सम्प्रदाय व भौगोलिक विधि तन्त्र आदि बहुमुखी ज्ञान से छात्रों को परिचित कराना पृथ्वी तल पर मानव के उद्भव उसके विकास क्रम, मानव प्रजाति तथा जनसंख्या संसाधन प्रदेशों का विशद ज्ञान

### **Programme specific outcomes ( Geography)**

B.A. (Geography) PSO1 सामान्य ज्ञान में बढ़ते भौगोलिक प्रश्नोंत्तर में छात्रों को भौगोलिक ज्ञान में प्रवीण व दक्ष बनाना।

B.A. (Geography) PSO2 विभिन्न प्रतियोगी परीक्षा जैसे- I.A.S, P.S.C., Railway, SSC. and Banking में सफलता हेतु छात्रों के भौगोलिक ज्ञान में अधिकाधिक वृद्धि करना

M.A. (Geography) PSO1 भौगोलिक विधितन्त्र के ज्ञान से परिचित कराकर छात्रों को शोध करने हेतु मानसिक रूप से तैयार करना

M.A. (Geography) PSO2 नेट (यूजीसी) व स्लेट प्रतियोगी परीक्षाओं के लिए विशुद्ध रूप से तैयार करना

M.A. (Geography) PSO3 मानचित्रकार (Cartographer), सर्वेक्षक जैसे पदों के लिये अच्छे रोजगार अवसर हेतु उन्हें मानचित्रकला में दक्ष करना

## Course outcomes (Economics)

B.A. (Economics) CO1 अर्थशास्त्र का अर्थ, परिभाषाएं, विषय-वस्तु, मांग, उपयोगिता विश्लेषण सिद्धान्त, उत्पादन सिद्धान्त तथा वितरण सिद्धान्त

B.A. (Economics) CO2 अर्थव्यवस्था की प्रकृति, विशेषताएं, संसाधन, जनसंख्या, नियोजन, निर्धनता, गरीबी, बेरोजगारी, कृषि, उद्योग आदि

B.A. (Economics) CO3 राष्ट्रीय आय की अवधारणाएं, मुद्रा एवं बैंकिंग के साथ-साथ इससे संबन्धित विभिन्न अवयवों

B.A. (Economics) CO4 राजस्व एवं अन्तर्राष्ट्रीय व्यापार से सम्बन्धित विभिन्न सिद्धान्तों जैसे अन्तर्राष्ट्रीय व्यापार सिद्धान्त, करारोपण आदि

B.A. (Economics) CO5 आर्थिक विकास का अर्थ उसको प्रभावित करने वाले तत्व, विकासशील व अल्पविकसित देशों से सम्बन्धित सिद्धान्त, गरीबी, बेरोजगारी आदि

B.A. (Economics) CO6 स्फीति नियन्त्रण, बेरोजगारी, गरीबी नियंत्रण तथा कृषि, उद्योग नीतियों का अध्ययन

B.A. (Economics) CO7 आर्थिक विचारों का इतिहास जिसमें पाश्चात्य अर्थशास्त्रियों के आर्थिक विचार तथा भारत के कुछ प्रमुख विद्वानों के आर्थिक विचारों का अध्ययन

M.A. (Economics) CO1 मांग विश्लेषण के विभिन्न सिद्धान्त, उत्पत्ति के नियम, वस्तु तथा साधनों की कीमत निर्धारण के सिद्धान्त का अध्ययन

M.A. (Economics) CO2 विकास व उसको प्रभावित करने वाले कारक तथा आर्थिक विकास से सम्बन्धित विभिन्न सिद्धान्त है।

M.A. (Economics) CO3 डाटा संग्रह की विभिन्न विधियों, केन्द्रीय प्रवृत्ति की मापे, सह-सम्बन्ध गुणांक, सूचकांक, प्रायिकता आदि

M.A. (Economics) CO4 अन्तर्राष्ट्रीय व्यापार के विभिन्न सिद्धान्त, व्यापार शर्तें, भुगतान सन्तुलन IBRD, IMF, WTO आदि है।

M.A. (Economics) CO5 श्रम बाजार, रोजगार, मजदूरी निर्धारण के सिद्धान्त व क्रियान्वयन, औद्योगिक संबंध तथा व्यापार सम्बन्ध है।

M.A. (Economics) CO6 राष्ट्रीय सिद्धान्त, कीन्स सिद्धान्त, उपयोग व विनियोग फलन, गुणक, त्वरक, मुद्रा परिमाण सिद्धान्त, ब्याज सिद्धान्त

M.A. (Economics) CO7 लोक वित्त का अर्थ व विषय वस्तु, बजट, करारोपण, लोक व्यय तथा लोक ऋण आदि

M.A. (Economics) CO8 आर्थिक विकास और उसका निर्धारण, भारत में नियोजन, जनसंख्या, गरीबी, बेरोजगारी, कृषि तथा उद्योग

M.A. (Economics) CO9 अर्थशास्त्र विषय से सम्बन्धित मौखिक प्रश्न

M.A. (Economics) CO10 कृषि और आर्थिक विकास, कृषि उत्पादकता, भूमि सुधार और नीतियों, ग्रामीण श्रम पूर्ति, पूंजी और ग्रामीण शाख की भूमि आदि का अध्ययन

### Programme outcomes (Economics)

B.A. (Economics) PO1 "आर्थिक विश्लेषण का सिद्धान्त" अर्थशास्त्र के विशिष्ट सिद्धान्तों का ज्ञान, भारतीय अर्थव्यवस्था के विभिन्न क्षेत्रों यथा कृषि उद्योग, सेवा, व्यापार जनसंख्या, गरीबी आदि से सम्बन्धित समस्याओं का विश्लेषण करने में दक्षता

B.A. (Economics) PO2 'राष्ट्र आय विश्लेषण मुद्रा तथा बैंकिंग' विभिन्न अवधारणाएं तथा निर्धारण, मुद्रा के कार्य महत्व तथा इसके विभिन्न सिद्धान्त एवं बैंकिंग क्षेत्र के विभिन्न क्रिया कलापों को समझने की दक्षता 'लोक वित्त तथा अन्तर्राष्ट्रीय व्यापार' लोक व्यय, लोक ऋण, व्यवस्था के साथ-साथ अन्तर्राष्ट्रीय व्यापार के विभिन्न सिद्धान्तों सन्तुलन, मुद्रा अवमूल्यन आदि से सम्बन्धित व्यवहारों को समझने की दक्षता

B.A. (Economics) PO3 'कम-विकसित देशों का अर्थशास्त्र', अल्पविकसित देशों की समस्याएं, बाधाएं, आर्थिक विकास के सिद्धान्त, नियोजन, 'भारत की आर्थिक नीतियां' जनसंख्या, बेरोजगारी, गरीबी उन्मूलन, कृषि उद्योग तथा व्यापार से सम्बन्धित भारत की आर्थिक नीतियों को समझने में दक्षता 'आर्थिक विचारों का इतिहास' पाश्चात्य तथा भारतीय अर्थशास्त्रियों के जीवन दर्शन व उनके विचारों को समझने दक्षता

M.A. (Economics) PO1 उपभोक्ता व्यवहार सिद्धान्त, उत्पादन फलन तथा कीमत निर्धारण एवं वितरण से सम्बन्धित सिद्धान्त को संवृद्धि एवं विकास के सामाजिक एवं संस्थागत दृष्टिकोणों के साथ-साथ विकास के विभिन्न सिद्धान्त, अर्थशास्त्र विषय में प्रयुक्त होने वाले गणितीय तथा सांख्यिकीय विधियाँ अन्तर्राष्ट्रीय व्यापार के विभिन्न सिद्धान्तों, लाभों, भुगतान सन्तुलन, अन्तर्राष्ट्रीय संस्थाओं के साथ-साथ भारत की व्यापारिक नीतियाँ श्रम बाजार, रोजगार मजदूरी निर्धारण के साथ-साथ औद्योगिक सम्बन्धों को समझने में दक्षता

M.A. (Economics) PO2 राष्ट्रीय आय, उपभोग फलन, निवेश फलन, रोजगार सिद्धान्त के साथ-साथ मौद्रिक नीतियों एवं व्यापार चक्रों को समझने में दक्षता, लोक व्यय, करारोपण, लोक ऋण, राजकोषीय नीति के साथ-साथ भारतीय लोक वित्त, आर्थिक विकास, नियोजन, जन सम्बन्धी विशेषताओं के साथ-साथ कृषि उद्योग मौद्रिक तथा बाह्य क्षेत्रों को समझने में दक्षता प्राप्त करता है। इसका चतुर्थ प्रश्न पत्र vica-voce है इसमें छात्र/छात्राओं से अर्थशास्त्र तथा कृषि क्षेत्र से सम्बन्धित विभिन्न आर्थिक विश्लेषण

### Programme specific outcomes (Economics)

B.A. (Economics) PSO1 अर्थशास्त्र विषय के साथ स्नातक उपाधि प्राप्त करने वाले छात्र/छात्राएं निम्नलिखित क्षेत्रों में अपना भविष्य उज्ज्वल कर सकते हैं:- 01. शिक्षा विभाग 02. प्रशासनिक सेवा 03. बैंकिंग क्षेत्र 04. प्रबन्धन क्षेत्र 05. स्टाक मार्केट 06. निजी व्यवसाय आदि।

M.A. (Economics) PSO1 अर्थशास्त्र विषय के साथ स्नातकोत्तर उपाधि प्राप्त करने वाले छात्र/छात्राएं निम्नलिखित क्षेत्रों में अपना भविष्य उज्ज्वल कर सकते हैं:- 01. भारत अर्थ सेवा 02. वित्तीय एवं आर्थिक सलाहकार 03. विभिन्न वित्तीय विभागों में प्रमुख अर्थशास्त्री 04. प्रवक्ता एवं प्रोफेसर 05. निदेशक 06. सचिव एवं प्रबन्धक 07. बैंकिंग क्षेत्र आदि।

## Course outcomes (Hindi)

B.A. (Hindi) CO1 भाषा-प्रकृति स्वरूप और ऐतिहासिक परिदृश्य (हिन्दी भाषा का ऐतिहासिक परिचय एवं बोलियों से परिचित होना)

B.A. (Hindi) CO2 व्यवहारिक धरातल (हिन्दी व्याकरण का ज्ञान होना)

B.A. (Hindi) CO3 प्राचीन एवं मध्यकालीन काव्य (हिन्दी साहित्य के इतिहास में आदिकाल, भक्तिकाल के कवियों की जानकारी)

B.A. (Hindi) CO4 हिन्दी नाट्य साहित्य (हिन्दी गद्य विद्या नाटक का परिचय होना)

B.A. (Hindi) CO5 प्रयोजन मूलक हिन्दी का स्वरूप (हिन्दी के कामकाजी रूप से परिचित कराना)

B.A. (Hindi) CO6 हिन्दी का आधुनिक गद्य विधाएं (गद्य की नवीन विधाओं से परिचित होना)

B.A. (Hindi) CO7 आधुनिक हिन्दी काव्य (हिन्दी साहित्य के आधुनिक काल के कवियों से परिचित होना)

B.A. (Hindi) CO8 हिन्दी कथा साहित्य (कहानी और उपन्यास से परिचित होना)

B.A. (Hindi) CO9 अद्यतन काव्य (आधुनिक हिन्दी काव्य में आधुनिक युग के कवियों से परिचित होना)

B.A. (Hindi) CO10 निबन्ध एवं अन्य गद्य विधाएं (निबन्ध एवं गद्य की अन्य विधा की जानकारी)

B.A. (Hindi) CO11 क्षेत्रीय भाषा और साहित्य (देश की क्षेत्रीय भाषा और साहित्य से परिचित कराना)

M.A. (Hindi) CO1 निबन्ध, कहानी एवं अन्य गद्य विधाएं (हिन्दी साहित्य की अन्य विधाएं के साथ-साथ निबन्ध एवं कहानी से परिचय होना)

M.A. (Hindi) CO2 प्राचीन एवं मध्यकालीन काव्य (हिन्दी साहित्य के इतिहास के आदिकाल एवं भक्तिकाल साहित्य के कवियों से परिचय करवाना)

M.A. (Hindi) CO3 हिन्दी साहित्य भाषा और देवनागरी लिपि का इतिहास (हिन्दी साहित्य का इतिहास एवं देवनागरी लिपि का इतिहास पर विस्तृत जानकारी)

M.A. (Hindi) CO4 साहित्य शास्त्र और समालोचना के सिद्धान्त (काव्य शास्त्र एवं पाश्चाय काव्यशास्त्र का परिचय)

M.A. (Hindi) CO5 भारतीय साहित्य (हिन्दी के साथ-साथ देश की दूसरी भाषा का ज्ञान होना)

M.A. (Hindi) CO6 आधुनिक हिन्दी काव्य (आधुनिक युग के कवियों से परिचय करवाना)

M.A. (Hindi) CO7 नाटक, एकांकी एवं उपन्यास (छात्रों को नाटक, एकांकी एवं उपन्यास का विस्तृत ज्ञान)

M.A. (Hindi) CO8 विविध विकल्प, कबीर, सूर, जायसी, भारतेन्दु हरिश्चन्द्र, प्रयोजन मूलक हिन्दी (छात्रों के ज्ञान हेतु किसी एक कवि का विशेष अध्ययन कराना)

M.A. (Hindi) CO9 साहित्यिक निबन्ध एवं वस्तुनिष्ठ प्रश्न (प्रतियोगात्मक परीक्षाओं की दृष्टि से छात्र/छात्राओं को निबन्ध एवं वस्तुनिष्ठ प्रश्नों की जानकारी कराना)

M.A. (Hindi) CO10 मौखिकी एवं प्रोजेक्ट (साक्षात्कार एवं शोध हेतु छात्रों को तैयार कराना)

### Programme outcomes (Hindi)

B.A. (Hindi) PO1 हिन्दी भाषा एवं उसकी बोलियों का ज्ञान एवं हिन्दी व्याकरण की जानकारी होना।

B.A. (Hindi) PO2 प्रयोजनमूलक हिन्दी के माध्यम से कामकाजी हिन्दी की जानकारी।

B.A. (Hindi) PO3 हिन्दी साहित्य का इतिहास, आधुनिक हिन्दी साहित्य का इतिहास एवं भाषा के साथ-साथ देश की अन्य भाषाओं की जानकारी।

M.A. (Hindi) PO1 हिन्दी साहित्य, भाषा और देवनागरी लिपि का इतिहास, आदिकाल एवं भक्तिकाल की जानकारी के साथ गद्य की अन्य विधाओं के साथ भारतीय साहित्य की जानकारी मुहैया कराना।

M.A. (Hindi) PO2 आधुनिक हिन्दी काव्य के साथ ही नाटक एकांकी, उपन्यास और साथ ही प्रतियोगात्मक परीक्षाओं की दृष्टि से वस्तुनिष्ठ प्रश्न की तैयारी साथ ही साक्षात्कार हेतु मौखिक परीक्षा एवं शोध हेतु प्रोजेक्ट फाइल की तैयारी कराना।

### Programme specific outcomes (Hindi)

B.A. (Hindi) PSO1 सफलता हेतु छात्र/छात्राओं को सामान्य हिन्दी एवं व्याकरण का ज्ञान

B.A. (Hindi) PSO2 प्रयोजनमूलक हिन्दी के माध्यम से छात्र/छात्राओं के सामने रोजगार के अनेक अवसर जैसे- हिन्दी अनुवादक, राजभाषा अधिकारी, हिन्दी अधिकारी, हिन्दी टंकण, हिन्दी उद्घोषक, पत्रकार, एंकर आदि रोजगार के अवसर

M.A. (Hindi) PSO1 नेट/स्लेट प्रतियोगात्मक दृष्टि से छात्र/छात्राओं को हिन्दी साहित्य का पर्याप्त ज्ञान होना।

M.A. (Hindi) PSO2 प्रतियोगात्मक परीक्षाओं की तैयारी हेतु छात्र/छात्राओं को तैयार करना साथ ही मौखिकी एवं प्रोजेक्ट के माध्यम से उन्हें मानसिक रूप से शोध की ओर तैयार करना

### Course outcomes (Physical Education)

B.A. (Physical Education) CO1 It creates awareness about fitness among students

B.A. (Physical Education) CO2 It develops sports culture among students

B.A. (Physical Education) CO3 It brings about changes in the behaviour of students

B.A. (Physical Education) CO4 It makes students learnt to be disciplined in life

B.A. (Physical Education) CO5 It develops competency among students

### Programme outcomes (Physical Education)

B.A. (Physical Education) PO1 After completion of programme students shall be able to keep themselves physically, mentally fit and can develop sports culture and competency. Moreover they can create awareness among masses.

### Programme specific outcomes (Physical Education)

B.A. (Physical Education) PSO1 Can do B.P.Ed and other physical education related courses and can teach in schools, can give coaching and can act as fitness trainer.

### Course outcomes (Political Science)

B.A. (Political Science) CO1 Political Theory: Students get knowledge about govt. formation and functioning. They also acquire sense of rights, equality, justice and democracy.

B.A. (Political Science) CO2 National Movement and Indian Constitution: Students come to know how India won her freedom and what are their fundamental rights and duties.

B.A. (Political Science) CO3 Western Political Thinkers: Various political philosophies are useful for the students, as they get knowledge of state's emergence, individual and state relation and different political and constitutional norms and values.

B.A. (Political Science) CO4 Comparative Governments: Constitutional and political aspects of major countries like USA, UK, France , Swiss are imbibed into the minds of students thereby widening their vision.

B.A. (Political Science) CO5 Public Administration: It orients students to pursue their career in civil services, and private sector both, thus the country is benefited with the service of energetic youths.

B.A. (Political Science) CO6 Indian Political thought: Kautilya, Nehru, Gandhi, Ambedkar, who shaped India's path, are taught to the students preachings of such great thinkers prepare students for discussions, debates and speeches.

B.A. (Political Science) CO7 International Politics: Students come to know about the conflict and cooperation occurring at world arena, this is how a vision for peace emerges, among them.



M.A. (Political Science) CO1 Western Political Thinkers: Various political philosophies are useful for the students, as they get knowledge of state's emergence, individual and state relation and different political and constitutional norms and values.

M.A. (Political Science) CO2 Comparative politics and institutions, Comparative Governments: Constitutional and political aspects of major countries like USA, UK, France, Swiss are imbibed into the minds of students thereby widening their vision.

M.A. (Political Science) CO3 Indian govt. and Politics (As in B.A. I, Ist paper) Political Theory: Students get knowledge about govt. formation and functioning. They also acquire sense of rights, equality, justice and democracy. Students can become leaders, orator.

M.A. (Political Science) CO4 International Politics: Students come to know about the conflict and cooperation occurring at world arena, this is how a vision for peace emerges, among them.

M.A. (Political Science) CO5 Foreign Policy of Major Countries: Students desire the idea of foreign policies of USA, UK, China and India and how these states interact among themselves.

M.A. (Political Science) CO6 International Law: Students become aware with the rules of warfare, terrorism, environment, extradition and these affect the relations among various states.

M.A. (Political Science) CO7 International Organization: global organizations like UNO, ICJ, ILO, UNESCO, UNICEF, FAO, WHO and regional groups SAARC, ASEAN, NAM, G-7, BRICE, inculcate students with the knowledge of these bodies and their utility for mankind.

M.A. (Political Science) CO8 West Asia in World Politics: Oil, (the lifetime of human civilization) has its best source in this region, which also causes tension and strife occasionally. Sectarian violence and genesis of major religion in this region, makes this study very lucrative for the pupils.

### Programme outcomes (Political Science)

B.A. (Political Science) PO1 Students know the pros and cons of democracy. In addition they come to know the sacrifices of great freedom fighters and India's constitutional and Political machinery.

B.A. (Political Science) PO2 Inculcation of ethical, moral, philosophical norms and values are done and they become enlightened citizens.

B.A. (Political Science) PO3 Well updated with the General Awareness. Must read newspapers and magazines, must undergo through debates, discussions and speeches.

M.A. (Political Science) PO1 By completing this course the students become a tool in the process of nation building. Various political institutions, meant for the progress of the country, are known to the students, very well.

M.A. (Political Science) PO2 In addition to above, must read manifesto of political parties and go through political speeches, keenly observe international events.

### Programme specific outcomes (Political Science)

B.A. (Political Science) PSO1 Useful in pursuing the occupation of journalist, advocate, political acitivist, human right activist and in running N.G.O's.

M.A. (Political Science) PSO1 (As above) In addition, one can indulge in surveys, invterviews, field work, project work and related tasks. Sometimes, profession of research associate and teachers also accrue after the post graduation.

### Course outcomes (Sanskrit)

B.A. (Sanskrit) CO1 काव्य एवं काव्य शास्त्र, किरातार्जुनियम महाभारत (वनकाव्य)

B.A. (Sanskrit) CO2 व्याकरण अनुवाद एवं संस्कृत साहित्य का इतिहास-संज्ञा सन्धि प्रकरण

B.A. (Sanskrit) CO3 नाटक गद्यकाव्य तथा काव्य शास्त्र, अभिज्ञान शाकुन्तलम, कादम्बरी महाश्वेतावृत्तान्त तथा शुकनासोपदेश साहित्य दर्पण नाटक लक्षण, कथा तथा आख्यायिका

B.A. (Sanskrit) CO4 व्याकरण, निबन्ध, गद्यनाटय साहित्य का इतिहास, लघुसिद्धान्त कौमुदी (अजन्तप्रकरण) नाटक साहित्य का इतिहास-भास के नाटक अभिज्ञान शाकुन्तलम, मुद्राराक्षस मृच्छकटिकम्

B.A. (Sanskrit) CO5 वेदमन्त्र, अपठितांश तथा भारतीय संस्कृति, ऋग्वेद-पुरुष सूक्त, अग्निसूक्त, शुक्त सूक्त, शिव संकल्प मूक्त, अथर्ववेद-पृथ्वी सूक्त। ईशावस्योपनिषद, मूलरामायण, श्री मदभगवतगीता, भ्रमरगीत, भारतीय संस्कृति-पुरुषार्थ चतुष्टय, वर्णाश्रमधर्म, संस्कार एवं पंचमहायज्ञ।

B.A. (Sanskrit) CO6 नाटक, व्याकरण, और छन्द, उत्तररामचरितमानस, लघुसिद्धान्त कौमुदी कृदन्तप्रकरण व छन्द आर्य, अनुष्टुप, इन्द्रवज्रा, उपन्द्रवज्रा, उपजाति, वंशस्थ, मन्दाक्रान्ता, शिखरिणी आदि।

B.A. (Sanskrit) CO7 अद्यतन संस्कृत साहित्य, अद्यतनकविता, शिवराज विजयम प्रथम निश्वास, आधुनिक संस्कृत साहित्य का इतिहास।

### Programme outcomes (Sanskrit)

B.A. (Sanskrit) PO1 महाभारत काल के राज्य व्यवस्था के विषय में ज्ञान प्राप्त होता है तथा संज्ञा और सन्धि के ज्ञान प्राप्त करते हैं।

B.A. (Sanskrit) PO2 प्राचीन संस्कृत साहित्य के नाट्य शास्त्र का ज्ञान प्राप्त होता है तथा व्याकरण में रूप और हलन्त प्रकरण युष्मद अस्मद तद् इत्यादि के विषय पर ब्रह्म ज्ञान प्राप्त होता है।

B.A. (Sanskrit) PO3 वेदों शास्त्रों का ज्ञान प्राप्त होता है। भारतीय संस्कृति संस्कार वर्णश्रम इत्यादि के विषय पर ज्ञान प्राप्त होता है। संस्कृत का प्राचीनतम इतिहास के विषय में ज्ञान प्राप्त होता है तथा विभिन्न छन्दों के विषय में ज्ञान प्राप्त होता है।

### Programme specific outcomes (Sanskrit)

B.A. (Sanskrit) PSO1 संस्कृत का क्षेत्र विशाल है। रोजगार के विभिन्न क्षेत्र छात्र/छात्राओं को आमन्त्रित करते हैं जैसे शिक्षा का क्षेत्र, पाणिडत्य का क्षेत्र, पुरातत्व विभाग प्राचीन एवं अर्वाचीन संस्कृत साहित्य का क्षेत्र, विभिन्न देशों में संस्कृत अनुवादक इत्यादि। विभिन्न प्रकार के अनुष्ठान तथा गृह शान्ति व अन्यान्य प्रकार की पूजा अर्चना कराने हेतु देश तथा विदेश में भी विद्वानों की महती आवश्यकता होती है।

### Course outcomes (History)

B.A. (History) CO1 Political History of Medieval India (1200-1526 A.D.); knowledge of medieval India sources, rise and downfall of Slave dynasty, Tuglaq Dynasty, Lodhi dynasty, Nature of state, Central & provincial administration, literature and architecture.

B.A. (History) CO2 History of Europe (1450-1789 A.D.); knowledge of Emergence of Renaissance, Nature and Impact, Rise of National states-Spain, France, England and Roman Empire, England and Industrial revolution, Rise of Russia and Austrain Empire, American war of Independence.

B.A. (History) CO3 Political History of Medieval India (1526-1740 A.D.); knowledge of Mughal Emire in India, Later Medieval India

B.A. (History) CO4 History of Europe (1789-1870 A.D.) knowledge of Europe since Napoleon, The Rise of Modern Europe.

B.A. (History) CO5 Political History of Modern India (1740-1946 A.D.) knowledge of Advance History of Modern India, Freedom Struggle, social background of Indian Nationalism

B.A. (History) CO6 History of Europe (1871-1950 A.D.) knowledge of History of Modern Europe, Bismarch, Hitler, Evolution of Modern Italy, A History of War and Peace 1939-65, cold war and its origins.

B.A. (History) CO7 History of India culture knowledge of Indue Valley civilization, Vedic period, Jainism and Buddhism, History and culture of Indian people Religions and Social reforms, India today, our Heritage.

M.A. (History) CO1 Historiography-Theory and Method-knowledge of Historiography, bias in History, Modern trends of History writings, objectivity in History.

M.A. (History) CO2 World History (1453-1870 A.D.) knowledge of decline of feudalism and risen of modern Era, Renaissance, Reformation movement, Rise of states-Spain, France, England etc. Industrial and Intellectual movements.

M.A. (History) CO3 History of Medieval India and Central Asia (1200-1526) knowledge of medieval India sources, Rise and downfall of slave dynasty, Tughlag dynasty, Lodhi dynasty, Nature of state, Central and provincial administration, art and literature.

M.A. (History) CO4 History of Medieval India (1526-1657) knowledge of Mughal Empire in India.

M.A. (History) CO5 National Movement of India (1857-1947 A.D.) knowledge of Advanced History of Modern India, Freedom struggle, Nationalism

M.A. (History) CO6 World History (1870-1950 A.D.) knowledge of incident happened in World between (1870-1950 A.D.)

M.A. (History) CO7 History of Medieval India (1658-1761 A.D.) knowledge of later Mughal period, Emergence and decline of Maratha Empire.

M.A. (History) CO8 Society, Economy and Culture of Medieval India (1200-1750 A.D.) knowledge of evolution of Indian culture, Vedic period, Religions and social reforms upto Independent India.

### **Programme outcomes (History)**

B.A. (History) PO1 Knowledge of Political History of Medieval India and knowledge of History of Europe (1450-1789 A.D.)

B.A. (History) PO2 Knowledge of Political History of Medieval India (1526-1740 A.D.) and knowledge of History of Europe (1789-1870 A.D.)

B.A. (History) PO3 Knowledge of Political History of Modern India (1740-1964 A.D.) and knowledge of History of Europe (1871-1950A.D.) and knowledge of evolution of Indian culture.

M.A. (History) PO1 Knowledge of Historiography-Theory and Method, knowledge of incidents happened in world between 1453-1870, knowledge of History of Medieval India (1200-1657)

M.A. (History) PO2 Knowledge of National Movement of India (1857-1947 A.D.) knowledge of World History (1870-1950 A.D.) knowledge of History of Medieval India (1658-1761) knowledge of society, Economy and culture of Medieval India (1200-1750 A.D.)

### Programme specific outcomes (History)

B.A. (History) PSO1 Students are benefited by acquiring knowledge of Political History of Medieval India and knowledge of History Europe (1450-1789) for competitive exams.

B.A. (History) PSO2 Students are benefited from knowledge of Political History of Medieval India (1526-1740 A.D.) and knowledge of History Europe (1789-1870 A.D.) and prepare themselves for competitive exams.

B.A. (History) PSO3 Students are benefited by acquiring overall knowledge of Medieval, Modern and Europe History and prepare themselves for various competitive exams.

M.A. (History) PSO4 Students get knowledge of Indian and World History and prepare themselves for competitive exams such as I.A.S., P.C.S., NET/SET, Railways etc.

### COURSE OUTCOMES (Commerce)

B.Com. CO1. Basic form of communicating ; Communication models and processes. Effective Communication.

B.Com. CO2. Planning of statistical investigation, census and sampling methods, Collection of primary and secondary data.

B.Com. CO3. Meaning and scope of accounting, Book keeping and accounting, Branches of accounting, Accounting principles.

B.Com. CO4. Framework of Indian Business Laws. Laws of contract, Sale of Goods Act, Negotiable Instrument Act, Consumer Protection Act.

B.Com. CO5. Principles of Business Economics, Basic problems, Market Structures Factor Pricing, Marginal productivity, Interest.

B.Com. CO6. Emerging issues in business at the national and international level, Liberalisation, Globalisation, International Environment.

B.Com. CO7. Basic knowledge of the provisions of the Companies Act. Relevant case Laws.

B.Com. CO8. Basic concepts and the tools used in cost accounting. Material, Overheads, Cost Ascertainment, Cost Records.

B.Com. CO9. Basic principles of management, Planning, Organising, Motivating and Leading people at work, Management of Change,

B.Com. CO10. Basics of Income Tax and its implications, Heads of Income, Computation of Tax, Tax Management, Tax administration.

B.Com. CO11. Entrepreneur, promotion of venture, Entrepreneurial Behaviour, Entrepreneurial Development Programmes, Role of Entrepreneur.

B.Com. CO12. Public Finance, Public Expenditure, Public Revenue, Public Debt Financial Federalism under constitution, Budgetary Procedure.

B.Com. CO13. Provisions of the Factories Act relating to Health, Safety and welfare of the workers. Indian Trade Union Act.

B.Com. CO14. Final Accounts, Valuation of Goodwill and shares, Accounting for Amalgamation, Consolidated Balanced Sheet.

B.Com. CO15. Objectives of Auditing, Audit process, Audit procedure, Audit of Limited companies, Recent trends in Auditing.

B.Com. CO16. Money functions, Role of finance in economy, Indian Banking System, Credit Creation, Development Banks, Reserve Bank of India.

B.Com. CO17. Information Revolution and Information Technology, Fundamental of Computers, Computer based Business Applications, Information system audit.

B.Com. CO18. Financial management, Capital Budgeting, Cost of Capital, Capital structure, Dividend policy, Management of Working Capital

B.Com. CO19. Management Accounting, Financial Statements, Absorption and marginal costing, Budgeting for profit planning and control.

### **Programme outcomes (Commerce)**

B.Com. PO1- Business Communication, Business Statistics, Financial Accounting, Business Regulatory Framework, Business Economics, Business Environment.

B.Com. PO2- Company Law, Cost accounting, Principles of Business Management, Income Tax, Fundamentals of Entrepreneurship, Public Finance, Industrial Law.

B.Com. PO3- Corporate Accounting, Auditing, Money & Financial System, Information Technology & its implications in business, Financial Management, Management Accounting.

M.Com. PO1- Management Concepts and Organisational Behaviour, Indian Economic Environment, Human Resource Management, Statistical analysis, Accounting for managerial Decisions, Marketing Management.

M.Com. PO2- Corporate Financial Accounting, Financial Management, Income tax-Law, Accounts and planning, Advertising & Sales Management, Consumer Behaviour, Marketing Research.

### Programme specific outcomes (Commerce)

B.Com. PSO1- Basics of business laws, effective business communication skills, analytical ability, accounting knowledge, principles of Business Economics applicable in business.

B.Com. PSO2-Basic knowledge of Companies Act 2013 and principles of management, exposure to tools used in cost accounting, basics of Income tax, return preparation and filing, exposure to entrepreneurial culture and to preparing them to set up and manage their own small units,

B.Com. PSO3- Awareness about Corporate accounting, imparting knowledge about methods of auditing, exposure to the working of money & financial system, familiarise the students with the innovations in information technology, conceptual framework of financial management.

M.Com. PSO1- Acquaintance with management concepts and organisational behaviour, knowledge of Indian Economic environment, knowledge of E-Commerce and Human Resource Management, develop statistical analysis ability, acquaintance with accounting required for managerial decisions, basics of marketing management which helped in Job and business.

M.Com. PSO2- Knowledge of corporate financial accounting, financial management skills, Income tax planning and return filing, Advertising and Sales skills development, marketing research techniques.

### Course outcomes (Mathematics)

B.Sc. (Mathematics) CO1 Algebra and Trigonometry including sequence and series, group, rings, complex functions hyperbolic function, Gregory series.

B.Sc. (Mathematics) CO2 Calculus including Rolle's Theorem, Mean Value Theorem, Successive differentiation, Maxima & Minima, Beta and Gamma functions, Areas and Volumes.

B.Sc. (Mathematics) CO3 Geometry and Vector Calculus including Three Dimensional System, Central conicoids, Vector differentiation and integration, Line integrals, Theorem of Gauss, Green and Stokes.

B.Sc. (Mathematics) CO4 Linear Algebra and Matrices including vector spaces and their elementary properties, Types of Matrix, Characteristic equation, Eigen values and Eigen vectors.

B.Sc. (Mathematics) CO5 Differential Equations and Integral Transforms including Types of Differential Equations and Method of their solution, Integral Transforms, fourier Transforms.

B.Sc. (Mathematics) CO6 Machanics including velocity and acceleration, SHM, Motion in resisting medium, Rocket motion, common catenary.

B.Sc. (Mathematics) CO7 Real Analysis including real numbers, sequences of real numbers, properties of sequential continuous functions, Riemann Integral, metric spaces.

B.Sc. (Mathematics) CO8 Complex Analysis including functions of a complex variable, Analytic functions, Fourier series, Mapping, Complex Int.

B.Sc. (Mathematics) CO9 Numerical Analysis and Programming in C including Finite differences, Divided differences, Num. Int., Solution of the equations, programmer's model of computer.

B.Sc. (Mathematics) CO10 Linear Programming including Linear Programming problems, convex sets, Transportation Problems, Assignment Problems

M.Sc. I (Mathematics) CO1 Advanced Algebra including Group, Ring Theory, Inner Product Spaces, Canonical forms.

M.Sc. (Mathematics) CO2 Analysis: Real & Complex Properties of the integral, sequences and series of functions, Measure spaces, complex Integral, Evaluation of integrals, Bilinear transformation.

M.Sc. (Mathematics) CO3 Differential Equations Preliminaries, Basic Theorem, Differential Inequalities and Uniqueness, Poincare, Linear second order equation.

M.Sc. (Mathematics) CO4 Advanced Fluid Dynamics Kinematics & Kinetics Irrotational Motion in 3D, Reynold number, Dynamical Similarity.



M.Sc. (Mathematics) CO5 Advanced Discrete Mathematics including semigroups and Monoids, Lattices, Boolean Algebra, Graph Theory, Introductory computability Theory, Grammars and Languages.

M.Sc. (Mathematics) CO6 Partial Differential Equations and Their Numerical Solutions) including Transport Equation, Laplace's Equation, Heat Equation, Wave Equation, Non-linear First order PDE, Representation of Solutions.

M.Sc. (Mathematics) CO7 Operations Research including Linear Programming, Transportation and Assignment Problems, Dynamic Programming, Integer Programming, Non linear Programming.

M.Sc. (Mathematics) CO8 Topology including Topological spaces, Countable spaces, Separable spaces, Compactness connected spaces, Nets and filters, Metrization Theorems.

M.Sc. (Mathematics) CO9 Mathematical Statistics including Probability, Moment Generating and Characteristic Functions and Cumulants, Gamma, Beta distribution functions of t, F and z test of significance, Theory of estimates.

M.Sc. (Mathematics) CO10 General Relativity and Cosmology including General Relativity, Algebra of Tensors, Riemannian metric, Theory of gravitation, Cosmology-Mach's Principle.

### Programme outcomes

B.Sc. (Mathematics) PO1 Basic knowledge of Trigonometry, Tangents, Normals, Quadrature, Rectification, Volumes and Surfaces of solids of revolution, system of conics, Three dimensional system, Two dimensional system and Vectors.

B.Sc. (Mathematics) PO2 Basic knowledge of Velocity and acceleration, Simple Harmonic motion, Motion under the laws of forces, Earth attraction, Rocket motion, Central orbits. Constrained Motion.

B.Sc. (Mathematics) PO3 Basic knowledge of Centre of gravity, stable and unstable equilibrium, virtual work, Forces in three dimensions.

B.Sc. (Mathematics) PO4 Basic knowledge of Transportation Problems, Assignment Problems, Game Theory.

M.Sc. (Mathematics) PO1 Advanced knowledge of Network Analysis, Project planning and Control with PERT-CPM.

M.Sc. (Mathematics) PO2 Advanced knowledge of Flow Through a nozzle, Liquid streaming past a fixed sphere, stress components in a real fluid, sonic and supersonic flows of a gas.

M.Sc. (Mathematics) PO3 Advanced knowledge of finite state Machines and their Transition, Tabu diagrams, Equivalence of finite state Machines, Graph Theory, Turing Machine.

### Programme specific outcomes (Mathematics)

B.Sc. (Mathematics) PSO1 Providing tuitions to Intermediate & UG classes to become as Self Employee.

B.Sc. (Mathematics) PSO2 Eligible for all Civil Services Examinations and Recruitment for Bank's P.O. clerical etc.

B.Sc. (Mathematics) PSO3 All types of job as Technical Assistant in Govt. Sectors as well as private sectors.

M.Sc. (Mathematics) PSO1 Lectures in Govt. Inter College/Aided Inter College.

M.Sc. (Mathematics) PSO2 After competing, CSIR-UGC NET to become Assistant Professors, Researcher etc.

M.Sc. (Mathematics) PSO3 Specific jobs such as Statistical officer, Scientist Data Analyst etc.

### Course outcome B.Ed.

B.Ed. CO1 Concept and Process of Childhood Development. Theories of childhood development and their significance.

B.Ed. CO2 Education and Indian society, Heritage: Philosophical and Educational, Education for Transformation, Policy framework for public education.

B.Ed. CO3 Process of knowing and learning, Approaches to learning, differences in individual learners, class room dynamics and role of teachers, teaching as a complex activity.

B.Ed. CO4 Language and Society, language development acquisition, class room discourse, reading, listening and speaking, developing writing skills.

B.Ed. CO5 Disciplinary knowledge, syllabus and content in disciplinary areas, motion of the disciplinary Doctrine.

B.Ed. CO6 Gender issues: key concepts, gender studies, gender power and education, gender issues in curriculum, gender sexual harassment and abuse.

B.Ed. CO7 Reading and Reflecting on text activities related to reading of text, activities related to skills and strategies, activities related to assignment, activities related to observation and discussion, activities related to evaluation and reflection.

B.Ed. CO8 appreciation of arts and crafts, visual art in education, performing art in education.

B.Ed. CO9 ICT in education, Psychological bases of using ICT, introduction to computers, ICT supported teaching/learning strategies, e-learning and web based learning.

B.Ed. CO10 knowledge generation and child centered education, sociological basis of education, concept of curriculum, determinants and curriculum, textbook evaluation.

B.Ed. CO11 Concept, meaning and overview of assessment and evaluation, approaches to assessment, feedback role in assessment and furthering learning, assessment tool. Examination system, practices and policies.

B.Ed. CO12 Inclusive education concept and nature competencies development for inclusive education. Inclusive education and its practices.

B.Ed. CO13 Basis concept and nature of environment, natural resources and associated problems, biodiversity and its conservation, environmental conservation.

B.Ed. CO14 Concept and relevance of peace, understanding peace as a dynamic social reality.

B.Ed. CO15 Tools in guidance counselling issues and techniques, career information and training.

B.Ed. CO16 Philosophical bases, yoga, meditation, stress management.

B.Ed. CO17 Planning, Implementation, psychological aspects, teaching of children with special need.

B.Ed. CO18 Educational Philosophy and self development and contradiction management, self expression, self-realization and development of social self.

### **Programme outcomes**

B.Ed. PO1 Study of different methods of understanding child, understanding the specific features of childhood and Adolescence as distinct stages of development.

B.Ed. PO2 Concept of education and history of education, understand the national goal according to Indian institution, understanding diversity of India routine.

B.Ed. PO3 Knowledge and understanding about the learner and the teaching learning process to bring effectiveness in the learning outcomes.

B.Ed. PO4 Sensitivity to the language diversity existing in the class room, Development of listening and speaking activities.

B.Ed. PO5 The nature and role of disciplinary knowledge in the school curriculum, conceptualize the paradigm shift in the nature and disciplines.

B.Ed. PO6 Basic understanding and familiarity with key concepts-gender bias stereotypes, parity, equity, patriarchy and feminism.

B.Ed. PO7 (a) Insight on the meaning and nature of science, developing lesson planning skills.

(b) Teaching and biological science insight on the meaning and nature of biological science

(c) Understanding nature and scope of Maths, development an insight into areas and objectives.

(d) Development and understanding of nature and scope of Home Science. Understand various subjects included in Home Science.

(e) Teaching of social studies, understanding of pedagogical process and created issues, evolve a national and international perspective.

(f) Teaching of English, Create an warm accepting class room management environment. Understand the nature and characteristics of language and use of English language.

(g) भाषा और उसके विधि रूपों से छात्राध्यापक अवगत हो सकेंगे। भाषायी कौशल एवं प्रकृति से छात्र परिचित हो सकेंगे।

(h) Knowledge of Ancient History of Sanskrit, knowledge of teaching method and skills.

(i) To develop a critical understanding about the nature of commerce and its interface with society. To prepare the teacher trainee for managerial role in school.

B.Ed. PO8 Development of capacities as reader, writers and thinkers, when they learn reading and writing together.

B.Ed. PO9 Development of aesthetic sensibilities and learn the use of art in teaching learning. Integration curricular and co-curricular activities for overall development of learner.

B.Ed. PO10 To develop and understanding of the concept of ICT in Education and an understanding of the importance and need of communication through ICT.

B.Ed. PO11 Epistemological and sociological basis of education. Differentiate between difference epistemological terms.

B.Ed. PO12 Critical understanding of issues in assessment and evaluation concepts, such as formative and summative, assessment, evaluation and measurement, test, examination.

B.Ed. PO13 To understand about the concept of environmental education. To develop sense of awareness about the environmental pollution and possible hazards and its causes and remedies.

B.Ed. PO14 Peace Education: Comprehend the concept of peace education, recognized the importance of peace education in national development.

B.Ed. PO15 Understanding of the concept, need and meaning of guidance and counselling, acquaintance with the principle issues, problems and procedure of guidance and counselling.

B.Ed. PO16 The concept of holistic health and various dimensions and determine arts of health.

B.Ed. PO17 Special Education: Knowledge of different perspectives in the area of education of children with disabilities, Reformulate attitudes towards children with special needs.

B.Ed. PO18 Various aspects of his/her own self, Understand the concept of self development and self efficacy.

#### **Programme specific outcome (B.Ed.)**

B.Ed. PSO1 Education and professional degree to make good citizen, good knowledge based effective teachers.

## Course Outcomes (Psychology)

B.A. (Psychology) CO1 The students learn the basic psychological processes e.g. memory, forgetting, motivation, emotion, thinking, intelligence etc. and their underlying mechanisms. Further an understanding of the biological basis of human behaviour including the structure and functions of the nervous system and the sensory organs is also imparted.

B.A. (Psychology) CO2 About the scientific method and experimental designs. It also includes statistical analysis e.g. calculation of measures of central tendency and dispersion, correlation and graphical representation of data. It further endeavours to familiarizes the students with computer softwares that aid in statistical analysis.

B.A. (Psychology) CO3 Experiments that have been selected in such a way as to ensure the integration of the learning of paper 1 and paper 2.

B.A. (Psychology) CO4 Various types of abnormal behaviours including its signs, symptoms, etiology, and treatment.

B.A. (Psychology) CO5 Social processes with the focus on the individual. It includes inter alia socialization, perceiving others and groups, attitudes, group dynamics, leadership and helping behaviour.

B.A. (Psychology) CO6 The students are taught the skills of test administration which is an important psychological tool for assessing an individual's mental and/or behavioural characteristics.

B.A. (Psychology) CO7 Advances the understanding of the students of Psychological Measurement, Research Method and Statistics. The topic of psychological measurement inter alia includes scaling technique, level of measurement, and errors in measurement. The research method section comprises of research design and its types etc. Statistical analysis part consists of hypothesis testing and making inferences, ANOVA, Non parametric statistics.

B.A. (Psychology) CO8 Counselling and guidance, Counselling includes types, processes, skills, phases of counselling etc. It further elaborates the nature, goals, and functions of guidance. Testing techniques in guidance e.g. intelligence, personality, aptitude tests etc. have also been included.

B.A. (Psychology) CO9 Health Psychology helps the students in understanding the body's physical systems and psychological factors that contribute in maintaining physical health and developing disorders.

B.A. (Psychology) CO10 The skills of the students so that they can under expert guidance develop a test/questionnaire, collect data and statistically analyse it.

M.A. (Psychology) CO1 Advance level of knowledge in the areas of Research Method and Statistics. The various types of research designs are explained in addition to the different methods of data collection. The section on Statistics incorporates inter alia correlation and regression, two way ANOVA, and non parametric statistics.

M.A. (Psychology) CO2 A detailed theoretical foundation of cognitive processes has been laid in this paper which attempts to integrate the classic works with the modern advances in the field. Topics like Attentional processes, perceptual processes, Memory system, Thinking and Problem Solving, and Creativity among others have been included in this paper.

M.A. (Psychology) CO3 Personality theories are one of the most fascinating areas of Psychology. It deals with the individual differences as has been theorized by different philosophers and psychologists. It includes the psychoanalytic approach, neo analytic approach, humanistic approach, trait theory, type theory to understand the complexity of human personality etc.

M.A. (Psychology) CO4 Social psychological processes including the cultural aspects. It incorporates topics like Applied Social Psychology, Cultural Psychology and Cultural Learning besides the conventional topics.

M.A. (Psychology) CO5 Practical skills of experiment designing, data collection, and its interpretation.

M.A. (Psychology) CO6 The applied aspect of assessment and measurement of psychological attributes has been discussed in this paper. It includes assessment of general mental abilities, special abilities, and personality etc. It further emphasizes on the ethical and social considerations of testing.

M.A. (Psychology) CO7 Human development since inception till death. It covers the socio emotional and cognitive aspects of development including the context of development. Developmental pathologies have also been incorporated in the syllabus.

M.A. (Psychology) CO8 Psychopathology, classification system, approaches to psychopathology, and various disorders with a focus on the development of the disorder, their signs and symptoms, and their etiology.

M.A. (Psychology) CO9 Theoretical foundation of Psychopathology as it extends the etiology to treatment. It also includes teaching of various psychotherapeutic technique, psychotherapeutic relationship, processes, and issues associated with them.

M.A. (Psychology) CO10 Administration and interpretation of psychological tests and project work. The project work stimulates the research potential of students and prepares them for further research work/Ph.D.

### Programme Outcomes (Psychology)

B.A. (Psychology) PO1 The students would learn the fundamental psychological processes and the statistical operations required in data analysis. It further enhances their understanding of scientific methods and experimentation.

B.A. (Psychology) PO2 The learning of this course ensures that the students learn the social psychological phenomenon and understand the problem and causes of abnormal behaviour. They would develop the skills of test administration and its interpretation.

B.A. (Psychology) PO3 The syllabus ensures the advance understanding of research method and statistics. It further enhances their understanding of general physical health condition. They develop the skill of counselling and guidance. The project work sharpens their research skills.

M.A. (Psychology) PO1 Students acquire in depth theoretical and applied understanding of the experimental psychology, advance research method, statistics, social psychology and abnormal behaviour in addition to the experimentation.

M.A. (Psychology) PO2 The programme focuses more on the applied aspect e.g. measurement and assessment, clinical and community intervention. It further harnesses the research aptitude of the students by including project work.

### Programme specific outcomes (Psychology)

B.A. (Psychology) PSO1 The knowledge of statistics enhances the employability of students for data analysis.

B.A. (Psychology) PSO2 The study of social psychology and abnormal behaviour acts as asset which increases the student's understanding of individual behaviour. This knowledge facilitates in the growth of emotional intelligence which is essential for success in business and entrepreneurship etc.



B.A. (Psychology) PSO3 The study of health psychology and counselling and guidance combined with improved understanding of research method and statistics increases the desirability of the candidate in the job market.

M.A. (Psychology) PSO1 The advance study of cognitive psychology, research method, statistics, social psychology and abnormal behaviour ensures that students perform well in competitive examinations including UGC NET.

M.A. (Psychology) PSO2 The applied part of psychology especially clinical and community intervention prepares the students for taking psychology professionally. Further the project work enhances their research skills which is much demanded in marketing etc.

### Course Outcomes (Chemistry)

B.Sc. (Chemistry) CO1 Study of atomic structure, periodic properties of elements, structure and chemical bonding, Study of s and p block elements.

B.Sc. (Chemistry) CO2 Structure and bonding of organic molecules, Mechanism of organic reactions, type studies of aromatic and aliphatic compounds.

B.Sc. (Chemistry) CO3 Mathematical concepts and fundamentals of computer, physical properties of matters (Gas, liquids, solids, and colloids), Chemical kinetics and catalysis.

B.Sc. (Chemistry) CO4 Study of d and f block elements, complex compounds, Acids, bases and non aq. Solvents.

B.Sc. (Chemistry) CO5 UV and IR spectroscopy, Types studies of alcohols, phenols, esters, carboxylic acids and nitrogen containing compounds.

B.Sc. (Chemistry) CO6 Thermodynamics, thermo chemistry, chemical equilibrium, Electro chemistry and phase equilibrium.

B.Sc. (Chemistry) CO7 Metal Ligand bonding in complexes, Stability of complexes, reaction mechanism, electronic spectra of complex, bioinorganic chemistry, Hard and Soft Acids and Bases and organ metallic chemistry.

B.Sc. (Chemistry) CO8 Nuclear magnetic resonance (NMR) spectroscopy, Organo metallic Compounds, Organosulphur Compounds, Heterocyclic Compounds. Carbohydrates, Amino Acids, Peptides, Proteins and Nucleic Acids, Fats, Oils and Detergents, Synthetic Polymers, Synthetic Dyes, Organic Synthesis via Enolates.

B.Sc. (Chemistry) CO9 Introductory Quantum Mechanics, Spectroscopy, Physical Properties and Molecular Structure, Elementary Quantum Mechanics, Rotational Spectrum, Vibrational Spectrum Raman Spectrum, Electronic Spectrum, Photochemistry, Solutions, Dilute Solutions and Colligative Properties.

M.Sc. (Chemistry) CO1 Study of Stereochemistry and Bonding in Main Group Compounds, Metal Ligand Equilibria in Solution, Reaction Mechanism of Transition Metal Complexes, Metal Ligand Bonding, Electronic Spectra and Magnetic Properties of Transition Metal Complexes, Metal  $\pi$  – Complexes, Metal Clusters, Isopoly and Heteropoly Acids and Salts.

M.Sc. (Chemistry) CO2 Nature of Bonding in Organic Molecules, Stereochemistry, Reaction Mechanism Structure and Reactivity, Aliphatic Nucleophilic Substitution, Aliphatic Electrophilic Substitution, Aromatic Electrophilic Substitution, Aromatic Nucleophilic Substitution, Free Radical Reactions, Addition to Carbon Carbon Multiple Bonds, Addition to Carbon Hetero Multiple Bonds, Elimination Reactions, Pericyclic Reactions.

M.Sc. (Chemistry) CO3 Study of Quantum Chemistry, Thermodynamics, Chemical Dynamics, Surface Chemistry, Electrochemistry.

M.Sc. (Chemistry) CO4 Symmetry and Group Theory in Chemistry, Unifying Principles, Microwave Spectroscopy, Vibrational Spectroscopy, Electronic Spectroscopy, Magnetic Resonance Spectroscopy, Photoacoustic Spectroscopy, X ray Diffraction, Electron Diffraction, Neutron Diffraction. (B) Biology for Chemist Cell structure and Functions, Carbohydrate, Lipids, Amino acids, Peptides and Proteins, Nucleic Acids, or (B) Mathematics for Chemists Vectors and Matrix Algebra, Differential Calculus, Elementary Differential Equations, Permutation and probability.

M.Sc. (Chemistry) CO5 (a) Vibrational Spectroscopy, Electron Spin Resonance Spectroscopy, Nuclear Magnetic Resonance of Paramagnetic Substances in Solution and Mossbauer Spectroscopy of inorganic molecules. Ultraviolet and Visible Spectroscopy, Infrared Spectroscopy, Optical Rotatory Dispersion (ORD) and Circular Dichroism (CD), Nuclear Magnetic Resonance Spectroscopy, Carbon 13 NMR Spectroscopy and Mass Spectrometry of organic molecules. (b) Photochemical Reactions, Determination of Reaction Mechanism, Photochemistry of Alkenes, Photochemistry of Carbonyl Compounds, Photochemistry of Aromatic Compounds, Miscellaneous Photochemical Reactions. (c) Solid State Reactions, Crystal Defects and Non Stoichiometry, Electronic Properties and Band Theory, Organic Solids

M.Sc. (Chemistry) CO6 (a) Metal ions in Biological Systems, Na<sup>+</sup>/K<sup>+</sup> Pump, Bioenergetics and ATP Cycle, Transport and Storage of Dioxygen, Electron Transfer in Biology, Nitrogenase. (b) Introduction, Enzymes, Mechanism of Enzyme Action, Kinds of Reaction Catalysed by Enzymes, Co Enzyme Chemistry, Enzyme Models, Biotechnological Applications of Enzymes. (c) Biological Cell and its Constituents, Bioenergetics, Statistical Mechanics in Biopolymers, Biopolymer Interactions, Thermodynamics of Biopolymer Solutions, Cell Membrane and Transport of Ion, Biopolymers and their Molecular Weights, Diffraction Methods. (d) Study of environment, Environment, Hydrosphere, Industrial Pollution .

M.Sc. (Chemistry) CO7 (a) Organometallic Reagents, oxidation, reduction Rearrangements, Metallocenes, Nonbenzeoid Aromatics and Polycyclic Aromatic Compounds. (b) Disconnection Approach, Protecting Group, Protecting Group, Two Group C C Disconnections, Ring Synthesis, Synthesis of Some Complex Molecules.

CO8 Heterocyclic Chemistry and Chemistry of Natural Products

### Programme Outcomes (Chemistry)

B.Sc. (Chemistry) PO1 Basic knowledge of inorganic, organic and physical chemistry.

B.Sc. (Chemistry) PO2 Basic knowledge of metal, non metal, aliphatic and aromatic compounds.

B.Sc. (Chemistry) PO3 Basic knowledge of structure and bonding of transition metal complexes and organo metallic compounds.

B.Sc. (Chemistry) PO4 Qualitative and quantitative analysis of organic and inorganic compounds

M.Sc. (Chemistry) PO1 Advance knowledge of organic chemistry, inorganic chemistry, physical chemistry, photo chemistry, Environmental chemistry, Spectroscopy and instrumentation.

M.Sc. (Chemistry) PO2 Advance knowledge of bioinorganic, bioorganic, biophysical and heterocyclic chemistry. Analytic ability to analyze various given samples by different methods. General methods of organic synthesis and preparation of transition metal complexes.

### Programme special outcomes (Chemistry)

B.Sc. (Chemistry) PSO1 Academic value for higher studies and industries, environmental pollution control board, and various competitive exams.

B.Sc. (Chemistry) PSO2 Skill development, practical and theoretical knowledge of chemistry for higher studies and various industries and departments such as pharmaceuticals and food adulteration departments etc.

M.Sc. (Chemistry) PSO1 Advance knowledge of chemistry for various R & D industries of pharmaceuticals, petroleum, Paint, Metallurgy, environmental pollution control board, forensic lab and various other industries such as polymer and plastic.

M.Sc. (Chemistry) PSO2 Education sector, Research and analysis.

### Course Outcomes (Industrial Chemistry)

B.Sc. (Industrial Chemistry) CO1 General chemistry I & II Nomenclature of compounds, basic metallurgical operation

B.Sc. (Industrial Chemistry) CO2 Operations and energy balance in chemical industry

B.Sc. (Industrial Chemistry) CO3 Material balance, utility in chemical industry

B.Sc. (Industrial Chemistry) CO4 Unit process in organic chemicals manufacture I (Synthetic applications in synthetic organic chemistry)

B.Sc. (Industrial Chemistry) CO5 Unit process in organic chemicals manufacture II (Synthetic applications in synthetic organic chemistry)

B.Sc. (Industrial Chemistry) CO6 Unit process in inorganic manufacture I.

B.Sc. (Industrial Chemistry) CO7 Chemical process economics and industrial chemical analysis: Study of industrial management and spectroscopic techniques for chemical analysis

B.Sc. (Industrial Chemistry) CO8 Heavy inorganic chemicals and heavy organic chemicals Synthesis and applications of heavy inorganic and organic chemicals.

B.Sc. (Industrial Chemistry) CO9 Applications of catalysts, Industrial solvents, analytical reagents, Common solutions, Essential oils, Biochemical reagents, fine chemicals, coloring agents, Chromatographic materials and HPLC solvents

### **Programme Outcomes (Industrial Chemistry)**

B.Sc. (Industrial Chemistry) PO1 Basic knowledge of various Industrial operations, Metallurgical process Chromatographic separation, and identification of organic compounds.

B.Sc. (Industrial Chemistry) PO2 Synthetic applications of various organic chemicals in chemical industry.

B.Sc. (Industrial Chemistry) PO3 Basic knowledge of industrial management and chemical process for various chemical industry.

B.Sc. (Industrial Chemistry) PO4 Knowledge of Spectroscopic techniques, heavy organic and inorganic chemicals and synthesis.

B.Sc. (Industrial Chemistry) PO5 Knowledge of various environmental pollutions due to industry and prevention methods.

### **Programme special outcomes (Industrial Chemistry)**

B.Sc. (Industrial Chemistry) PSO1 Specific knowledge about chemical industries and skill developments for various posts in chemical and pharmaceutical industries. After completing this courses students can work as Researcher; Technician, Teacher, Analytical Chemist, Lab Chemist, Production Chemist, Chemical Engineering Associate, Biomedical Chemist, Demographer, Technical Writer.

### **Course outcomes (Urdu)**

B.A. (Urdu) CO1 Introduce to Urdu Novel, short story and writers.

B.A. (Urdu) CO2 An introduction of Urdu Poetry (Nazm) some specific poets and their Nazms, learning of critic and description.

B.A. (Urdu) CO3 Learning of articles writing and introduction of some specific articles of authors.

B.A. (Urdu) CO4 Knowledge of Urdu (Ghazal). A special part of Poetry. An introduction of Poets and their Poetic source.

B.A. (Urdu) CO5 Knowledge of Urdu language, developments of language and origins. History of Urdu development.

B.A. (Urdu) CO6 Learn to describe the different poetic branches of Urdu poetry-critics and history of Urdu poets.

B.A. (Urdu) CO7 To learning of translation from Urdu to Hindi, English and Persian and from their language to Urdu-Grammar and other literary terms.

M.A. (Urdu) CO1 An introduction of Naat, Qasidas and Marsias in Urdu those are the special branches of the Poetry.

M.A. (Urdu) CO2 An introduction of Urdu Fiction and the critical analysis.

M.A. (Urdu) CO3 History of Urdu Nazm and Masnavi and their importance in literature. How to describe them.

M.A. (Urdu) CO4 Knowledge of Urdu Poetry (Ghazals) and their Poets specialties and critic writing on Ghazal.

M.A. (Urdu) CO5 Knowledge of Urdu criticism and particular writers and views of different critic schools.

M.A. (Urdu) CO6 Knowledge of whole Urdu literature to know about History of Urdu literature.

M.A. (Urdu) CO7 A special study of any Urdu poets or authors. Iqba, Ghalib, Prem Chand, Meer Taqi Meer, Sir Syed Ahmad Khan and Raza Khan Bralue.

M.A. (Urdu) CO8 Learning of Essay writing.

### **Programme outcomes (Urdu)**

B.A. (Urdu) PO1 Knowledge about History of Urdu short stories and first Novel writer and introduction of Urdu (Nazm) and poems writers also.

B.A. (Urdu) PO2 Knowledge about History of Urdu short stories and first Novel writer and introduction of Urdu (Nazm) and poems writers also.

B.A. (Urdu) PO3 To introduce to history of Urdu literature and some various field of poetry, critic and grammar and translations learning also.

M.A. (Urdu) PO1 Knowledge about various kind of Urdu Poetry, Ghazal, Naat, Qasida, Marsia, Nazm, Masnavi and their poets, Urdu Fiction and fiction writers and the techniques.

M.A. (Urdu) PO2 Knowledge about History of Urdu literature, critic and school of thoughts. Learning of essay writing.

**Programme specific outcomes (Urdu)**

B.A. (Urdu) PSO1 Knowledge about whole text of Urdu literature, language and their writers techniques.

M.A. (Urdu) PSO1 Knowledge about History, critic and training of writing of essays in Urdu.