

	metabolic diseases such as milk fever, ketosis, pregnancy toxemia, hypomagnesemia of domestic animals. Systemic states and diseases : Fever, hyperthermia, hypothermia, toxemia, septicaemia, bloat, impaction, diarrhoea, dehydration and snake bite. Herd health Management : Herd immunity, disease free zones, chemotherapeutics and chemoprophylaxis for herd health. Vaccination and deworming schedule of livestock and poultry. Surgical intervention : Diagnosis and surgical intervention in fracture, hernia, choking, rumenotomy, castration and Caesarian section. 5. VETERINARY PUBLIC HEALTH AND EPIDEMIOLOGY Epidemiology : Principles and applications of epidemiological measures in the study of diseases and their control. National and international regulations on livestock diseases. Zoonoses : Socio-economic importance of zoonotic diseases. Role of animals in transmission of zoonotic diseases. Occupational zoonotic diseases. Animal Welfare and Jurisprudence : Role of veterinarian in animal welfare. Animal Welfare Board of India. Role and function of Committee for the Purpose of Controlling and Supervising Experiments in Animals (CPCSEA), Common offences against animals. Examination of living and dead animals in criminal cases. 6. WILD / ZOO / LAB ANIMAL HEALTH CARE Method of handling and restraint of Wild animals. Conservation of wild life. Management and feeding practice and housing of Wild, Zoo and Laboratory animals.
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ANTHROPOLOGY :

Paper – I :	1. Introducing anthropology: Meaning and scope of anthropology. Major branches of anthropology: 1.1 Main branches of Anthropology, their scope and relevance : (a) Social-cultural Anthropology, (b) Biological Anthropology, (c) Archaeological Anthropology, (d) Linguistic Anthropology. 1.2 Brief outline of the growth of anthropology. Enlightenment. Colonialism and anthropology. 2. Human evolution and Hominization process : 2.1 Theories of organic evolution. Human evolution and emergence of Man : (a) Biological and Cultural factors in human evolution, (b) Theories of Organic Evolution (Pre-Darwinian, Darwinian and Post-Darwinian), (c) Synthetic theory of evolution; Brief outline of terms and concepts of evolutionary biology. 2.2 Neutral theory of molecular evolution. 2.3 Concept of evolutionary biology: Skeletal changes, (skull, vertebral column, pelvic girdle, hind limb). 2.4 Characteristics of primates, Primate classification (general), Features and distribution of New World Monkey, Old World Monkey, Asian and African Apes. 2.5 Theories of human origin. 2.6 Geological time scale with special reference to Pleistocene epoch. 2.7 Distribution, characteristics and phylogenetic status : (a) Parapithecus (b) Dryopithecus, Sivapithecus (c) Australopithecus africanus, Australopithecus afarensis, Homo habilis (d) Homo erectus (Java Man, Peking Man) (e) Archaic Homo sapiens (f) Neanderthal Man – La-chapelle-Aux-Saints, Tabun Man (g) Anatomically Modern Homo sapiens – Cromagnon, Grimaldi, Chancelade 3. Human Genetics : 3.1 Methods – Mendelism, Twin-study, Cytogenetics, Population genetics. 3.2 Biological basis of inheritance: DNA structure and replication, Restriction Fragment Length Polymorphism (RFLP), Variable Number of Tandem Repeat(s) (VNTRs), Short Tandem Repeat(s) (STRs) protein synthesis, gene, allele, cell division. 3.3 Concept of Human Genome : nuclear genome, mitochondrial genome, Chromosome and chromosomal aberrations in man (Numerical and structural aberrations, point mutation), Satellite DNA.
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3.4 Patterns of inheritance – autosomal, sex-chromosomal, multifactorial, polygenic, sex determination, sex influenced. 3.5 Application of human genetics – consanguinity, inbreeding, genetic load, genetic counselling, forensic anthropology, personal identification, paternity identification, DNA fingerprinting, dermatoglyphics. 4. Human variation : 4.1 Concept of Race, racism. 4.2 Basis of variation – Morphological (hair, eye) metric (stature, head shape), Polymorphic (genetic marker) – blood group (ABO, Rh), Hb, PGM, HP, Y-chromosome STR, mtDNA. 4.3 Concept of Human physique and somatotype. 4.4 Concept of ethnic groups – Mongoloid, Caucasoid, Negroid, Australoid. 5. Human Growth and Nutrition : 5.1 Concept of human growth, stages of growth – Pre-natal, Post-natal, Adolescent. 5.2 Factors affecting the growth and development – genetic, environmental, nutritional, socio-economic. 5.3 Methodology of growth study. 6. Concept of Health and disease : 6.1 Concept of Communicable and Non-Communicable diseases. (Malaria and Type-2 diabetes respectively). Nutrition Deficiency related diseases. 6.2 Nutrition – concept of Macro and Micro nutrients and Deficiency. 7. Human adaptation : 7.1 Concept of Human adaptation and acclimatization – hot, cold and high altitude. Bergman's and Allen's Rules. 7.2 Anthropometry and its uses in understanding human adaptation (BMI and CI), Physiological variable (blood pressure, pulse rate), Body composition (fat patterning). 8. Cultural evolution : 8.1 Tool typology and technology of tool manufacturing. 8.2 Excavation, Exploration, Site survey, Application of GIS 8.3 Concept of Dating: Absolute (C14, K-Ar) Relative (Dendrochronology and Stratigraphy). 8.4 Features and distribution of prehistoric cultures with reference to India and Europe : (a) Paleolithic (b) Mesolithic (c) Neolithic (d) Chalcolithic (e) Iron Age. 9. Theories and concept of culture and society : 9.1 Brief outline of Anthropological Theories: Evolutionism, Diffusionism, Functionalism, Structuralism, Symbolism and Interpretative Approach, Post-structuralism and Post-modernism – Hermeneutics and Phenomenological Anthropology. 9.2 Concept (brief outline): Social structure, Social organization, Gender, Institution, Group, Community. 10. Culture and civilization : 10.1 Definition and features of culture and civilization. 10.2 Cultural relativism, Acculturation, Enculturation, Diffusion, Cultural lag, World view, Symbol. 10.3 Anthropological approaches to the study of civilization. 11. Elements of social organization : 11.1 Family – Definition, Types, functions, recent changes. 11.2 Marriage – Definition, Types, functions, recent changes. Marriage payments (dowry and bride wealth). Incest regulation, Preferential and prescribed forms of marriage. 11.3 Kinship - Definition of kinship system. Importance, Types of kinship systems, kin term classification.
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	11.4 Rules of Descent and alliance, Rules of residence, Descent groups. 12. Economic Anthropology : 12.1 Concept and approaches. 12.2 Major ways of subsistence – Hunting-gathering, Pastoralism, Horticulture and Settled Agriculture. 12.3 Production, Distribution (Reciprocity, Market exchange, Re-distribution), Consumption, Gift exchange. 12.4 Peasant. 13. Political anthropology : 13.1 Definition and approach. 13.2 Power, authority, social control, law, social sanction, governance. 13.3 Concepts of Band, Tribe, Chiefdom and State. 13.4 Political movement - Approaches of study, Types of socio-political movements (Revitalization, Messianic, Social solidarity, regional and Ethnic). 13.5 Ethnicity – Definition, concept of ethnic boundary. 14. Anthropology of religion : 14.1 Definition of religion, functions of religion. 14.2 Approaches to the study of religion (intellectual, psychological, functional, interpretative). 14.3 Concepts: Myth, magic, witchcraft, sorcery, taboo, totem, divination, rituals, symbolism in religion. 14.4 Religious specialists – shaman, witch-doctor, priest. 15. Social stratification : 15.1 Definition and features. 15.2 Theories/approaches. 15.3 Types – Caste and class. 15.4 Concepts: Status, role, age-set/age-grade, social mobility. 16. Ecological anthropology : 16.1 Definition, scope and approaches/methods of ecological anthropology. 16.2 Concept of culture ecology. 17. Emerging fields of social-cultural anthropology : 17.1 Development anthropology – Definition and scope, development, globalization. 17.2 Legal anthropology and Human Rights. 17.3 Anthropology of communication – visual anthropology, mass media, popular culture. 17.4 Anthropology of gender. 18. Basic methods of data collection and interpretation : 18.1 Qualitative and quantitative approaches, ethnography, fieldwork. 18.2 Basic methods/techniques of data collection – observation (special reference participant observation), interview, case study, schedule, questionnaire, genealogy, PRA and RRA. 18.3 Application of statistical principles – Descriptive statistics – central tendency (mean, median, mode), standard deviation, standard error, Testing of hypothesis: t-test, chi-square test.
Paper – II :	1. History and Development of Anthropology in India : 1.1 Colonialism and Anthropology in India.