



उत्तराखण्ड लोक सेवा आयोग

Uttarakhand Public Service Commission
Haridwar : 249404

Post: Veterinary Officer (पशुचिकित्सा अधिकारी)
Under: Animal Husbandry Department, Government of Uttarakhand

UKPSC VETERINARY OFFICER EXAM

उत्तराखण्ड पशुचिकित्सा अधिकारी चयन परीक्षा — 2026

(Veterinary Officer Selection Examination — 2026)

This Document Contains

- Official Exam Pattern and Syllabus
- Exam Structure: 3 papers, 400 questions, 800 total marks
- Paper I – General Studies & General Hindi (100 Qs, 200 marks, 2 hrs)
- Paper II – Veterinary Science (150 Qs, 300 marks, 3 hrs)
- Paper III – Animal Science (150 Qs, 300 marks, 3 hrs)
- Negative Marking: ¼ mark deducted for each wrong answer

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UKPSC Veterinary Officer Exam Pattern

Paper	Subjects	Type of Exam	No. of Questions	Max. Marks	Duration
Paper-I	General Studies and General Hindi	Objective Type	100	200	2 hours
Paper-II	Veterinary Science	Objective Type	150	300	3 hours
Paper-III	Animal Science	Objective Type	150	300	3 hours
	Total Marks			800	

Note 1: In this objective-type examination, negative marking will be applied. For every wrong answer given by a candidate, or if a candidate gives more than one answer to a single question (even if one of the given answers is correct), one-fourth ($1/4$) of the marks fixed for that question will be deducted as a penalty.

A- General Studies

No of Questions : 80

MM: 160

1	General Science and Knowledge of Computer Operation: Questions on General Science and Computer operation will cover general understating and application of science and Computers including matters of day to day observation.
2	History of India and Indian National Movement: Questions on history of India and Indian National Movement will be based on general understanding of ancient, medieval and modern India and India's freedom movement.
3	Indian polity: Questions on Indian polity will be based on Indian polity, Constitution and Panchayati raj.
4	Geography and Demography of India: Questions will be based on a general understanding of geographical, ecological, socio-economic aspects and demography of India.
5	Current Events: Questions will be based on current events of Uttarakhand and National importance.
6	History of Uttarakhand: Historical background of Uttarakhand: Ancient period (from earliest to 1200 AD) ; Medieval period (from 1200 to 1815 AD): Important dynasties and their achievements; Gorkha invasion and administration, British rule, Tehri State and its administration, role of Uttarakhand in the Freedom Movement of India.
7	Culture of Uttarakhand: Question will be based on Castes and tribes, religious and folk beliefs, traditions and customs, costumes and ornaments; Fairs and Festivals, dances, songs, musical instruments, sports, tournaments and awards.
8	Geography and Demography of Uttarakhand: Geographical Setup. Rivers, mountains, climate, soils, forest resources and horticulture, Major crops of Uttarakhand. Means of irrigation. Natural and man-made calamities and Disaster management. Water crises and watershed management, Environment and environmental movements. Population of Uttarakhand: Distribution, density, sex ratio, literacy and migration.
9	Economic and natural resoures of Uttarakhand: Education system of the State and important educational institutes; tourism, minerals and industries. The position of utiliszation of resources. Various schemes being implemented in Uttrarakhand for the eradication of poverty and unemployment.
10	General intelligence test: In General Mental Ability, questions will include test comprehension, reasoning and numerical ability.

Part B – General Hindi

No. of Questions: 20 | Max. Marks: 40

Vowels and consonants, classification of vowel and consonant letters; noun, pronoun and grammar concepts; तत्सम (Sanskrit-origin) and तद्भव (derived) words; प्रत्यय (suffixes); उपसर्ग (prefixes); समास (compounds); संधि (conjunctions); पर्यायवाची (synonyms); विलोम शब्द (antonyms); वाक्यांश के लिए एक शब्द (one word for a phrase); मुहावरे एवं लोकोक्ति (idioms and proverbs); विराम चिह्न (punctuation marks).

(80 + 20 = 100 questions; 160 + 40 = 200 marks – matches Paper-I total exactly.)

Question paper- II
(Veterinary Sciences Total Questions: 150 Max. Marks: 300
Time Duration: 3 Hours

1. Veterinary Pharmacology & Toxicology: General pharmacology including historical development, sources and nature of drugs, pharmacological terms and nomenclature of drugs. Pharmacokinetics and pharmacodynamics. Adverse drug reactions, drug interactions. Different types of drugs and their mechanisms of action on different body systems like autonomic nervous system, central nervous system, digestive system, cardiovascular system, respiratory system and urogenital system. Veterinary chemotherapy and drugs of abuse in animals. Pharmacology of indigenous medicinal plants. Poisonous plants and toxicity caused by metals and non-metals, agrochemicals, bacterial and fungal toxins, venomous bites and stings, food additives and preservatives, drugs and pesticide residues. Environmental pollutant and radiation hazards.

2. Veterinary Microbiology: History and scope of veterinary microbiology, bacterial stains & staining techniques. Microscopy and morphology of bacteria. Isolation and identification of aerobic and anaerobic bacteria. Antimicrobial sensitivity testing. Types and sources of infection, method of transmission of infection. Pathogenicity and determinants of virulence. Bacterial genetics, plasmids and drug resistance. Isolation, growth, cultural, morphological, biochemical and antigenic characteristics of important gram negative, gram-positive bacteria and fungi as well as epidemiology and pathogenesis, pathogenicity, diagnosis, prevention and control of bacterial and mycotic diseases caused by them. Mycotoxicoses of veterinary importance. PCR, DNA sequencing and DNA finger printing, bioinformatics, IPR and blotting techniques. Principles of immunology, lymphoid organs, tissues and cells associated with immunity, antigens, antibodies, antigen processing and antibody production, Major histocompatibility complex (MHC), immunotolerance, complement systems, hypersensitivities, cytokines. Concept of immunity to vaccines, serological tests. Structure and classification of viruses, virus replication, virus-cell interaction, cultivation of viruses. General properties, antigens, cultivation of important DNA and RNA viruses as well as pathogenesis, epidemiology, clinical signs, diagnosis, prevention and control of diseases caused by them and prions causing diseases in livestock and poultry.

3. Veterinary Parasitology: General parasitology, types of parasites, hosts and vectors. Modes of transmission of parasites, parasite-host interaction, immunity against parasitic infections or infestations. Life cycle of trematodes, nematodes, cystodes and protozoa as well as arthropods of veterinary importance including Identification of parasites, morphological features, their developmental stages, life cycles, modes of transmission, pathogenesis, epidemiology, diagnosis and general

control measures of disease conditions. Protozoan parasites including *Trypanosoma* spp., *Babesia* spp., *Theileria* spp., *Coccidia* spp., *Trichomonas* spp., *Histomonas* spp. Collection, fixation, preservation and mounting of parasites.

4. Veterinary Pathology: Major intrinsic and extrinsic causes of disease; haemodynamic disorders; reversible and irreversible cell injury; pathology of cell metabolism and necrosis. Postmortem changes, inflammation, immunopathology. Pathological changes affecting digestive, respiratory, musculoskeletal, cardiovascular, haematopoietic, lymphoid, urinary, reproductive, nervous, endocrine systems, skin and appendages, ear and eye. Animal oncology, veterinary clinical pathology, necropsy, urinalysis. Pathology of viral, bacterial, fungal, mycoplasmal and parasitic diseases. Nutritional and metabolic disorders; toxicopathology; avian pathology. Pathology of lab and wild animals. Gross and microscopic pathological lesions of different diseases. Demonstration of causative agents in tissue sections. Post mortem examination of poultry, writing of post mortem report. Collection, preservation and dispatch of clinical and morbid material for diagnosis. Pathology of important diseases of rats, mice, and guinea pigs.

5. Veterinary Public Health and Epidemiology: Role of veterinarian in public health; one health concept. Hygienic production of milk and milk products, meat and meat products. Prevention and control of adulterants and contaminants in milk and meat. Food -borne infections and intoxications, toxic residues of pesticides, hormones, heavy metals, antibiotics in food material. Risk analysis, WTO agreements, sanitary and phytosanitary measures. Epidemiology of livestock diseases, transmission and maintenance of infections, surveillance of animal diseases, animal disease forecasting. Role of OIE and laws on international trade of animals and animal products. Prevention and control of zoonotic diseases, multisectoral approach for zoonoses prevention and control. Emerging, re-emerging and occupational zoonoses. Role of domestic, wild, pet and laboratory animals and birds in transmission of zoonoses. Zoonotic pathogens as agents of bioterrorism. Epidemiology, clinical manifestations and management of important zoonoses. Environmental hygiene, ecosystem, biodiversity, air and water borne infections and intoxicants, noise pollution, nuclear hazards, impact of global warming and green house effects on livestock. Impact of climate change and international treaties or protocols.

6. Veterinary Surgery and Radiology : Preoperative, intraoperative and post operative considerations, sterilization and disinfection, sutures, surgical treatment of acute and chronic inflammation, tumors, cysts, hernia and hematoma, wound management, management of surgical shock, administration of local and general anesthesia, sedatives and tranquillizers, inhalation anesthesia, dissociative anesthesia. Avian, wild, zoo, exotics and lab animal anaesthesia and capture myopathy, anaesthetic emergencies and management. Physical properties of X-ray,

contrast radiography, diagnostic ultrasonography, Radiation hazards and safety measures. Surgical management of affections of head, neck, thorax and abdomen. Management of lameness in equine, canine and bovine; fractures, spinal trauma, rehabilitation and physiotherapy of orthopedic patients, Rumenotomy, cystotomy, caesarian operation, ovariohysterectomy, stringhalt and ovariectomy.

7. Veterinary Medicine: History of Veterinary Medicine, concept of animal diseases, various system of medicine, various aspect of clinical examination/ general examination and Systemic examination . Estimates of diseases, patterns of diseases, disease monitoring and surveillance, herd health and quarantine Concepts of diagnosis, differential diagnosis, treatment and prognosis of general systemic states/disorders like Fever, Septicaemia, Toxaemia, Shock , Dehydration, pain, stress and stressors, allergy & anaphylaxis. Diagnosis, Differential diagnosis, treatment, prevention and control of animal and poultry diseases of digestive, respiratory, cardiovascular, urinary, nervous, musculoskeletal, haemopoietic and lymphatic systems, skin and sense organs. Diagnosis, Differential diagnosis, treatment, prevention and control of various animal and poultry infectious diseases caused by bacterial ,viral, mycoplasmal, rickettsial, fungal and parasitic agents. Emergency and critical care medicine. Management of metabolic and deficiency disease and poisoning & toxicological disorders. Prevention, treatment and control of zoo and wild animal diseases. Vaccination and legal duties of veterinarians. The prevention and control of animal diseases Acts & Statutes, livestock Importation Act, insurance and liability. Animal welfare organizations and their role; human and animal welfare conflicts and veterinarians as animal welfare educators.

8. Veterinary Gynecology and Obstetrics: Clinical anatomy of male and female reproductive systems, prolonged puberty, estrous, fertilization, failure of conception, fertility improvement, management of infertility, sterility, applied endocrinology of pregnancy, herd reproductive health management. Estrus detection aids, estrus synchronization, ovulation, pregnancy diagnosis, parturition, prolapse, dystocia, fetotomy, postpartum uterine disorders, Clinical reproductive anatomy. Artificial insemination techniques in farm and pet animals, endocrinology of male reproduction, sexual behavior, semen ejaculation, semen extenders and dilutors, preservation and post thaw evaluation techniques. Forms of male infertility and breeding soundness evaluation of bulls. Ultrasonography of female reproductive tract; surgical procedures on reproductive organs of female, male and pet animals. Maintenance of liquid nitrogen containers, multiple ovulation and embryo transfer techniques.

9. Veterinary Clinics: Administration and management of work force of veterinary hospitals. Preliminary clinical examination of sick animals. Collection, preservation, labeling, packaging and storage of laboratory samples of clinical cases. Doctor -client interaction. Analysis of clinical samples like blood, urine, stool, synovial fluid, milk for laboratory diagnosis. Biopsy and morbid material for

histopathology, interpretation of laboratory findings with clinical condition of the animals.

Question paper- III (Animal Sciences)

Total Questions: 150

Max. Marks: 300

Time Duration: 3 Hours

1. **Veterinary Anatomy:** Osteology, arthrology, myology, splanchnology, angiology and neurology of different body parts (limbs, head and neck, thorax, abdomen and pelvis) of cattle and differences in buffalo, sheep, goat, camel, horse, dog, pig and fowl. Histology of digestive, circulatory, urinary, respiratory, nervous, lymphatic, endocrine, male and female genital systems and mammary glands of domestic animals. Histological techniques. Aesthesiology and microscopic structure of sense organs *i.e.* eye, ear and integument. Embryology of domestic animals.
2. **Veterinary Physiology:** Physiology of cardiovascular system, hematology. Physiology of muscular, digestive, respiratory, excretory and nervous systems. Physiology of growth and growth curves. Endocrinology and knowledge of various endocrine glands. Physiology of female reproduction, estrous cycle, lactation. Physiology of male reproduction and semen evaluation. Growth and environmental physiology and its impact on animals.
3. **Veterinary Biochemistry:** Scope and importance of veterinary biochemistry. Biochemistry and biological significance of carbohydrates (monosaccharides, disaccharides, polysaccharides, mucopolysaccharides), proteins, lipids and nucleic acids. Intermediary metabolism and metabolic pathways of carbohydrates, proteins, lipids and nucleic acids. Disorders of carbohydrate metabolism. Detection of serum biochemicals, including enzymes, hormones, minerals and vitamins, acute phase proteins; liver function tests, kidney function tests; biochemical basis for fluid therapy, metabolism of xenobiotics.
4. **Veterinary and Animal Husbandry Extension Education:** Basic concepts and philosophy of extension education in veterinary and animal sciences and its development and applications in India. Livestock based livelihoods and their evolution as well the role of animals in the contemporary society. Role of rural sociology in animal husbandry extension. Transfer of technology for livestock development. Communication and extension teaching methods. Strengths and limitations of information and communication technologies (ICTs) application in

livestock sector. Livestock economics, marketing and entrepreneurship. Contemporary issues in livestock enterprises.

5. **Animal Genetics and Breeding:** Importance and applications of statistics, biostatistics and computers tools in animal genetics and breeding. Principles of animal genetics including cytogenetics, expression of genetic inheritance, molecular genetics, concept of gene and its structure and molecular techniques used in animal genetics and breeding. Principles of population genetics. Livestock and poultry breeding, classification of breeds. Economic characters of livestock, poultry, and their importance. Types and methods of selection, breeding strategies for improvement of animals, development of new breeds/strains. Current livestock and poultry breeding policies and programmes in the state and country. Conservation of animal genetic resources. Application of reproductive and biotechnological tools for genetic improvement of livestock and poultry. Animal breeding for disease resistance. Breeding of pet, zoo and wild animals.
6. **Livestock Production Management:** Demographic distribution, problems and prospects of livestock industry in India. Common animal husbandry terms. Transportation of livestock and wild animals and common farm management practices. Common vices of animals and their prevention. Organic livestock production. Judging, selection and culling of livestock. Production and management of small and large ruminants, poultry, rabbitary/pet animals/equine/swine and zoo animals including their housing, breeds, feeding practices, records keeping and other required farm practices. Hatchery management. Animal welfare of different domestic, companion and zoo animals in routine and during natural calamities. Legal duties of veterinarians, Common offences against animals and laws related to these offences. Fodder production and conservation. Management of stray and fallen animals.
7. **Animal Nutrition:** Nutritional aspect of carbohydrates, protein and fats. Common feeds and fodders, their compositions, classification, availability and importance for livestock and poultry production. Nutritional requirements of different species of animals, including protein, carbohydrate, minerals and vitamins. Feed technology, additives, adulterations, feeding standards, formulation of balanced ration for different species of animals, Nutrient requirement and feed formulation for calves, dry, pregnant, and lactating animals, heifers, breeding bulls, working animals, layer and broiler production. Feeding experiments. Digestion and metabolism trial. Measurement of digestibility and factors affecting digestibility of a feed in ruminants. Formulation of ration and feeding of sheep and goat during different phases of growth and production (milk, meat and wool). Feeding of high yielding animals

and role of bypass nutrients. Metabolic disorders and nutritional interventions. Use of NPN compound for ruminants. Nutrient requirements and feed formulations in poultry, swine and equine.

8. **Livestock Products Technology:** Prospects of milk industry in India. Collection and processing of milk, quality testing, composition of milk, GLP practices and HACCP, dairy plant management. Preparation of milk products like Ghee, Paneer, Yoghurt, Khoya etc. and quality management. Importance of A1 and A2 milk. Knowledge of BIS, FSSAI specifications, food safety standards for milk and milk products. Layout and management of rural, urban and modern abattoirs. FSSAI standards on organization and layout of abattoirs. Animal welfare and pre-slaughter care. Ante mortem and post mortem examination of animal and meat, nutritive value of meat, processing technology for milk and meat products, Preservation of meat and meat products and maintenance of quality. Abattoir byproducts and effluent management. Laws governing national or international trade in meat and meat products. Organic and genetically modified meat and poultry products. Structure and properties of wool, its classification. Post shearing operations of wool and grading. Basic knowledge about fur, pelt and specialty fibers with respect to processing industry.



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