ANNEXURE - III

SCHEME AND SYLLABUS FOR RECRUITMENT TO THE POST OF VETERINARY ASSISTANT SURGEONS IN CATEGORY (4) OF CLASS-B IN AHDD&F Dept.

**SCHEME OF EXAMINATION**

<table>
<thead>
<tr>
<th>Part: A: WRITTEN EXAMINATION (Objective Type)</th>
<th>No. of Questions</th>
<th>Duration (Minutes)</th>
<th>Maximum Marks</th>
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<tbody>
<tr>
<td><strong>Paper-I: General Studies And General Abilities</strong></td>
<td>150</td>
<td>150</td>
<td>150</td>
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<tr>
<td><strong>Paper-II: Veterinary Science &amp; Post Graduate Degree Standard</strong></td>
<td>150</td>
<td>150</td>
<td>300</td>
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<th>Part: B: Interview</th>
<th>50</th>
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<td><strong>Total</strong></td>
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**Syllabus**

**Paper-I: GENERAL STUDIES AND GENERAL ABILITIES**

2. International Relations and Events.
3. General Science; India’s Achievements in Science and Technology.
4. Environmental issues; Disaster Management- Prevention and Mitigation Strategies.
5. Economic and Social Development of India and Telangana.
6. Physical, Social and Economic Geography of India.
8. Socio-economic, Political and Cultural History of Modern India with special emphasis on Indian National Movement.
9. Socio-economic, Political and Cultural History of Telangana with special emphasis on Telangana Statehood Movement and formation of Telangana state.
10. Indian Constitution; Indian Political System; Governance and Public Policy.
11. Social Exclusion; Rights issues such as Gender, Caste, Tribe, Disability etc. and inclusive policies.
12. Society, Culture, Heritage, Arts and Literature of Telangana.
13. Policies of Telangana State.
14. Logical Reasoning; Analytical Ability and Data Interpretation.
15. Basic English. (10th Class Standard)
PAPER-II: VETERINARY SCIENCE & POST GRADUATE DEGREE STANDARD

I. Part One: Subject: Veterinary Science (Degree Standard)

1.1. Veterinary Anatomy, Physiology and Biochemistry

Gross study of bones, joints, muscles of skeleton; Gross study of organs of digestive, respiratory, circulatory, urinary, nervous and reproductive systems; Mechanism of respiration; General functions of blood and its constituents (blood cells, plasma & serum) coagulation, cardiac cycle, blood circulation, blood pressure, renal function; Hormonal control of Lactogenesis; Environmental factors affecting animal production; Environmental stress on animal performance; Green House, Gases-Role of ruminants; Digestion, absorption and metabolism of carbohydrates, Proteins, fats and other nutrients in simple stomach animals and ruminants.

1.2. Livestock Management, Livestock Breeding and Genetics & Livestock Products Technology

Common terms used in Animal Husbandry; Demography of livestock; Housing, handling, restraining, ageing, breeding, feeding and caring of different age groups of different species of animals including zoo/wild and lab animals; Economic project proposal for housing and maintenance of livestock, poultry and lab animals; Routine farm practices of livestock and poultry; Strategies for enhancing productivity through livestock improvement; Quality maintenance of livestock by-products; Fodder production and management; Maintenance of labour, accounts and farm records.

Important breeds of cattle, buffalo, sheep, goat, pig, dog, horse and poultry, with special reference to economic traits of farm animals; Breeding of important species of zoo/wild animals. Breeding livestock for high performance and disease resistance; Principles of genetics; Nature of DNA and RNA-their models and functions; Applications of recombinant DNA technology, cloning and role of gene actions and cytogenetics; Animal breeding policies and programmes in State and Nation.

Layout and maintenance of milk, meat and egg processing units; Abattoir practices, methods of slaughtering and dressing, utilization of by products, unsound meat and its disposal; Preparation, processing, preservation, packaging, storage, transportation, nutritional value, quality control and marketing of livestock products and by-products; Objectives of meat inspection & laws, ante-mortem, post-mortem inspection; Legal standards of quality control, toxicity/pesticide residues and adulterants in livestock products and by-products.

1.3. Livestock Nutrition

Nutritional terms and definitions; Role of nutrition in livestock health and production; Classification and composition of feeds and fodders including forest grasses; Antinutritional factors and toxins in feeds and fodders; Feeding standards and nutrient
requirements of different categories of livestock and computation of rations; Nutritional deficiency and its influence on livestock performance; Feed supplements and additives; Conservation and preservation of feeds and fodders; Economic utilization of agro by-products for feeding livestock; Utilization of unconventional feeds; Wildlife nutrition.

1.4. Veterinary Microbiology

Aetiology, morphology, life cycle, transmission, pathogenesis, symptoms, lesions, diagnosis, treatment, control and prevention of bacterial, viral, fungal, Chlamydial, rickettsial diseases of domesticated animals, birds and zoo/wild animals; Organs/tissues/cells of Immune system; infection and immunity; type and grades of immunity, serological reactions and modern diagnostic techniques; Principles of vaccine production, different types of vaccines, storage and their administration.

1.5. Veterinary Pathology

Concept and cause of diseases in animals; General principles and procedures of necropsy; collection, preservation and dispatch of morbid materials for laboratory diagnosis, disease investigation; Veterolegal cases, writing of post-mortem report, notified diseases; General pathological conditions in bacterial, viral, fungal, Chlamydia, ricketsial, parasitic diseases, neoplasm’s, nutritional, metabolic, toxic, allergic and autoimmune diseases of domesticated animals, birds and zoo/wild animals; Exotic emerging and re-emerging diseases of livestock.

1.6. Veterinary Parasitology

Aetiology, morphology, life cycle, transmission, pathogenesis, symptoms, lesions, diagnosis, treatment, and strategic control of helminthic, protozoal and arthropod parasites affecting domesticated animals and poultry; Detection and management of antiparasitic drug resistance.

1.7. Veterinary Pharmacology & Toxicology

Drug/hormone/vitamin action/adverse reaction on various organs/systems of the body; Pharmacokinetics: dose, routes of administration, absorption, distribution, biotransformation and excretion of different drugs; General approaches of diagnosis and treatment of toxicity/poisons caused by metal, non metal, plants, weeds, drugs, agro chemicals, venom bites, sting bites and residue toxicity; Pharmacodynamics - local and general anaesthetics and antidotes; Antibiotics and chemotherapy.

1.8. Veterinary Epidemiology and Public Health

Environmental hygiene; Role of veterinarian in public health; Zoonoses including food-borne diseases: concept, scope, objectives and uses of epidemiology; Aetiology, transmission, pathogenicity, symptoms, lesions, diagnosis, differential diagnosis, treatment, control and eradication of major contagious and non infectious diseases of livestock, birds and zoo/wild animals; Livestock products and by-products in relation to public health including legislation and International (OIE, WTO) national food safety
standards; Socio economic impact of zoonotic diseases in India; Control of environmental pollutants; Establishment of Animal Healthcare Centres.

1.9. Veterinary Medicine

Diagnosis and treatment of various clinical manifestations of animals and poultry; Metabolic disorders, systemic, non systemic, infectious & non infectious diseases of livestock; Role of alternate/integrated/ethno veterinary medicine; Animal welfare and ethics, common offences against animals; Laws relating to offences affecting public health.

10.0. Veterinary Gynaecology and Obstetrics

Reproductive physiology-hormones and reproduction; Management of reproductive disorders in animals; Quality semen production and its characteristics in different species of animals, cryopreservation & artificial insemination; Multiple ovulation and embryo transfer technology in livestock and zoo animals; Pregnancy diagnosis, obstetrical operations; Planning and organisation of semen production and artificial insemination centres.

10.1. Veterinary Surgery & Radiology

General surgical principles, surgical equipment, operation theatre management, asepsis, anti-sepsis and sterilization; Radiographic pathology; Diagnostic imaging; Pre and post-operative considerations, anaesthesia, various surgical interventions in animals, surgical emergencies, intensive care of animals, physiotherapy, diathermy.

10.2. Veterinary Extension and Animal Husbandry

Livestock farming systems in rural India; Improved A.H. practices-rural upliftment; Communication technologies; A.H developmental programmes in state and central government; Livestock economics, marketing and business management; Livestock contribution to national economy; Economics of animal diseases and disease losses; Livestock trade against trans-boundary countries.

Part Two - Subject: Post Graduate Degree Standard

2.1. Veterinary Microbiology

General bacteriology, Mycology, General and systemic virology, Immunology, Vaccinology, Diagnostics of infectious diseases, Techniques in microbiology and immunology.

2.2. Veterinary Pathology

General pathology, Systemic pathology, Pathology of infectious diseases of domestic animals, Clinical pathology, Necropsy procedures and interpretations; Animal Oncology, Toxicopathology, Avian pathology, Pathology of Lab Animals, Fish, Wild & Zoo Animals; Exotic emerging and re-emerging diseases of livestock; Techniques in pathology and Veterolegal pathology.
2.3. Veterinary Parasitology

Veterinary Helminthology, Entomology, Acarology, Protozoology; Malacology, identification of parasitic stages in snails; Parasitic zoonoses, parasites of zoo and wild animals; Clinical parasitology, Immunoparasitology; Parasitological techniques; Trends in the control of livestock and poultry parasites; Strategic control measures of parasites affecting livestock with special emphasis on improved versions of chemical, biological and immunological control and integrated pest management; Assessment of anti helminthic, anti protozoal and Acaricidal drug resistance.

2.4. Veterinary Epidemiology and Public Health

Elements of veterinary public health; Zoonoses and public health; Bacterial, Rickettsial, Viral, Fungal, Parasitic agents of public health importance; Principles of food hygiene and safety, Food-borne infections and intoxications, Meat, Milk, Fish and Seafood their products and hygiene; Environmental pollution and safety; Bioterrorism and disaster management.

2.5. Veterinary Biotechnology

Fundamentals and application of biotechnological tools in animal health practices: Techniques of molecular biology, genetic engineering; Molecular diagnostics, Animal cell culture, Reproductive biotechnology, Vaccine biotechnology, Immunology; Bioinformatics, Animal genomics, Biodiversity, Biosafety and Bioethics.