



**NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT  
SYLLABUS FOR THE WRITTEN EXAMINATION FOR THE POST OF  
ASSISTANT MANAGER IN GRADE 'A'**

**ANIMAL HUSBANDRY**

(The syllabus is illustrative and not exhaustive. The syllabus should not be considered as the only source of information while preparing for the examination. Keeping in view the nature of examination, all matters falling within the realm of the subject concerned will have to be studied by the candidate as questions can be asked on all relevant matters under the subject. Candidates appearing for the examination should also prepare themselves for answering questions that may be asked on the current/latest developments/Acts taking place under the subject(s) although those topics may not have been specifically included in the syllabus.)

**Forage Production :**

Soils, soil fertility and fertilizers, irrigation methods and practices, agronomic practices of fodder crops, crop rotations and intensity, grasses and grasslands, silvipastoral systems, silage and hay making.

**Animal Genetics and Breeding :**

Basic concept of gene, laws of inheritance, linkage maps, sex determination, chromosomal aberration, gene mutation, systems of breeding, mating systems, heritability, repeatability and selection in animal breeding, size index, population genetics, gene type and phenotypic variation.

**Physiology of Reproduction and Lactation :**

Male and female reproductive systems, spermatogenesis, oestrous cycle, symptoms of heat, semen collection, evaluation and preservation, artificial insemination, fertilization and embryo transfer, pregnancy and lactation, structure of mammary gland, milk synthesis and milk ejection.

**Animal Nutrition :**

Composition of animal body, metabolism of carbohydrates, fats and proteins, macro and micro elements in nutrition, vitamins and hormones in nutrition, digestion, nutritive value, nutritional requirements, rumen metabolism, calf feeding, feed formulation and feeding patterns utilisation of crop residues and industrial by-products.

**Animal Health :**

Morphology, reproduction, life history and mode of infection of the livestock parasites – Trypanosoma, Babesiosis, Coccidia, Schistosoma, Trichomonas, Liver Flukes. Life history of insects such as flies, lice, ticks and mites and their importance in livestock farming. Major diseases of livestock, preventive and curative measures for their control.

**Poultry Production :**

Breeds of poultry – genetic principles – selection methods – mating systems – economic traits – poultry production systems and management of feeding, disease control and marketing of poultry products – other species – quails, ducks and guinea fowl.

**Other Species of Livestock (Sheep, Goat, Pig and Rabbit) :**

Important breeds – production systems, management – feeding – disease control – marketing.

**Meat and Meat Products :**

Production of meat – composition and characteristics of good meat – slaughter houses meat inspection – preservation of meat – meat by-products and its utilization.