

## Plan of Written Examination

All the aspirants are informed as under with respect to the written test to be conducted for the recruitment of **Poultry Storekeeper**:-

- (i) The Exam will be conducted in MCQ (Multiple Choice Questions) format. OMR sheets will be used for answering the questions.
- (ii) There will be negative marking. Each question carries 1 mark. **For every wrong answer, 1/4<sup>th</sup> mark would be deducted. The question(s) not attempted will receive no credit or discredit.**
- (iii) The test would be of 2 hours duration.
- iv) Pattern of the written competitive examination is as follows:-

Sr. No.	Topic	No. of Questions	Marks (Each Question carries 1 mark)	Type of Questions
1.	Questions from the Subject (Part A of Syllabus)	90	90	MCQs (Multiple Choice Questions)
2.	Questions from General Knowledge, English, Punjabi, Logical Reasoning and Mental ability (Part B of Syllabus)	30	30	
<b>Total</b>		<b>120</b>	<b>120</b>	

- v) Tentative syllabus for the written examination for the recruitment of **Poultry Storekeeper** is annexed at Annexure-1 and 2.

## Annexure-I Syllabus Part-A

### (Post-Poultry Storekeeper)

#### Zoology

##### 1. Diversity in Living World

- Biology- its meaning of relevance to mankind.
- Taxonomy- Concept of species and taxonomical hierarchy.
- Kingdom Animalia: Salient features and classification of non chordates upto phylum level.  
Salient features and classification of chordates up to class level.

##### 2. Structural organization in animals

- Tissue in Animals.
- Morphology , anatomy and function of different system( digestive, circulatory respiratory nervous and reproductive ) of earthworm, frog and an insect(Cockroach)

##### 3. Animal Physiology

###### Human Physiology

**Digestion and absorption:** Alimentary canal and digestive glands, role of digestive enzymes and gastrointestinal hormones, digestion ,absorption and assimilation of proteins carbohydrates and fats, egestion , nutrition and digestive disorders.

**Breathing and respiration:** Respiratory organs in human beings, Mechanism of Breathing and its regulation in human, Transport of Respiratory gases, Respiratory Volumes. Respiratory disorders.

**Circulation:** Composition of Blood, Blood Groups, Coagulation of blood, composition of lymph and its functions, structure of human heart and blood vessels, Cardiac Cycle, Cardiac output , ECG, double circulation, disorder of Circulatory systems.

**Excretion:** Modes of excretion , structure and function of excretory system, Urine formation , osmoregulation, Regulation of kidney function, Renin-angiotensin, role of other organs in excretion, Disorders of excretory system.

**Locomotion and movement:** Types of movement , skeletal muscle- contractile proteins and muscle contraction, skeletal system and its function, joints. Disorders of muscular and skeletal system.

**Neural control and coordination:** Neuron and nerves: Nervous system in humans-central nervous system, peripheral nervous system and visceral nervous system: Generation and conduction of nerve impulse; Reflex action: Sense organs: Elementary structure and function of eye and ear.

**Chemical coordination and regulation:** endocrine glands and hormones: human endocrine system-Hypothalamus, Pituitary ,Pineal, Thyroid, Parathyroid, adrenal, Pancreas, Gonads: Mechanism of hormone action: role of Hormones as messengers and regulators, Hypo- and hyperactivity and related disorders( common disorders eg Dwarfism)

#### 4. Reproduction

- **Human Reproduction:** male and Female reproduction systems: Microscopic anatomy of testis and ovary, Gametogenesis-spermatogenesis and oogenesis: Menstrual cycle: fertilization, embryo development up to blastocyst formation, implantation: Pregnancy and placenta formation (elementary idea): Parturition: Lactation.
- **Reproductive health:** Need of reproductive health and prevention of sexually transmitted diseases (STD): Birth control-Ned and Methods, Contraception and Medical Termination of pregnancy. (MTP), amniocentesis: infertility and assisted reproductive technologies-IVF, ZIFT, GIFT (Elementary idea for general awareness).

#### 5. Cell Biology, Genetics and Evolution

Structure and function of bio molecules: Carbohydrates, lipids proteins, and nucleic acid.

Enzymes types, properties, functions and enzymes action.

Cell-physico-chemical nature of plasma membrane, cell wall.

Ultra structure of cell organelles with brief

- Endoplasmic reticulum, golgibodies, lysosome, vacuoles, vacuoles, mitochondria, ribosomes, plasides, cilia, flagella, centrioles nucleolus.
- Cell Division: cell cycle, mitosis, meiosis, their significance.

**Heredity and variation:** Mendelian inheritance: Derivations from Mendelism- incomplete dominance, Co-dominance, Multiple alleles and inheritance of blood groups, Pleiotropy: Elementary idea of polygenic inheritance ,Chromosome theory of inheritance; Chromosomes and genes: Sex determination-in humans, birds, honey-bee, Linkage and crossing over, sex linked inheritance hemophilia, color blindness: Mendelian disorders in humans- Thalassemia: Chromosomal disorders in humans: Down's Syndrome, Tuner's and Klinefelter's syndromes.

**Molecules basis of inheritance :** Search for genetic material and DNA as genetic material: structure of DNA and RNA: DNA packaging replication, Central dogma, Transcription , Genetic code translation: Gene expression and regulation Lac Operon. Genome and human genomic project: DNA finger Printing.

**Evolution :** Origin of life, Biological evolution and evidences for biological evolution from Paleontology, comparative anatomy, embryology and molecular evidence: lamarcks theory of evolution Darwin's contribution, Modern synthesis theory of evolution, Mechanism of evolution Variation and natural Selection with eg.,

types of natural selection: Gene flow and genetic drift: Hardy-Weinberg's Principle, adaptive radiation: human evolution.

## 6. Biology and Human Welfare

**Health and Diseases.** Pathogens, parasites causing human disease Malaria, Filariasis, Ascariasis, typhoid, Pneumonia, Basic concepts of immunology vaccines: Cancer, HIV and AIDS, Adolescence , drugs and alcohol abuse.

**Improvement in food Production :** Plant breeding , tissue culture, single cell protein , Bio-fortification: Apiculture and animal husbandry.

**Microbes in human welfare:** in household food processing , industrial production: sewage treatment: energy generation and as biocontrol agents and biofertilizers.

## 7. Biotechnology and its Applications:

-Principles and process of Biotechnology: Genetic engineering(DNA technology)

- Application of Biotechnology in health and agriculture: human insulin and vaccine production , gene therapy: genetically modified organisms-Bt crops: Transgenic Animals: Bio-safety issues- Bio-piracy and patents.

## 8. Ecology and environment:

- **Organism and environment :** habitat and niche: Population and ecological adaptation: Population interaction- mutualism, competition, predation, parasitism, population attributes growth, birth rate and death rate, age distribution.

- **Ecosystem-** Patterns, components, productivity, and decomposition: energy flow, pyramids of number, biomass, energy ,nutrient cycling, Ecological succession: ecological services- Carbon fixation, pollination , oxygen release, biogeochemical cycle.

- **Concept of Biodiversity:** Patterns of Biodiversity: importance of Biodiversity, loss of biodiversity, biodiversity conservation, hotspots, endangered organisms extinction. Red data book, biosphere reserves, national parks and sanctuaries.

- **Environmental issues-** Air pollution and its control. Water pollution and its control, Agrochemical and its effects, Solid waste management, radioactive waste management. Greenhouse effect and global warning,

Ozone depletion, Deforestation. Any three case studies as success stories addressing Environmental issues.

## Annexure-2

### Part B Syllabus

**General Knowledge, English, Punjabi, Logical Reasoning and Mental Ability.**

<b>Sr. No.</b>	<b>Indicative Contents of Syllabus</b>	<b>Weightage (Approx.)</b>
1	<p><b>General Knowledge and Current affairs of National and International importance including:</b></p> <ul style="list-style-type: none"><li>(i) Political issues,</li><li>(ii) Environment issues,</li><li>(iii) Current Affairs,</li><li>(iv) Science and Technology,</li><li>(v) Economic issues,</li><li>(vi) History of Punjab-14<sup>th</sup> century onwards</li><li>(vii) History of India with special reference to Indian freedom struggle movement.</li><li>(viii) Sports,</li><li>(ix) Cinema and Literature.</li></ul>	10
2	<p><b>Logical Reasoning &amp; Mental Ability:</b></p> <p>Verbal reasoning: Coding, Decoding, Analogy, Classification, Series, Direction sense test, relations, mathematical operations, time test, odd man out problems.</p> <p>Non Verbal reasoning: Series, Analogy and Classification.</p> <p>Basic numerical skills, Percentage, Number system, LCM and HCF, Ratio and Proportion, Number series, Average, Problems based on Ages, Profit &amp; Loss, Partnership and Mixture, Simple and Compound Interest, Work and Time, Time and Distance. Mensuration and Data Interpretation.</p>	10

3	<p><b>English:-</b></p> <p>Basic Grammar, Subject and Verb, Adjectives and Adverbs, Synonyms, Antonyms, One Word Substitution, Fill in the Blanks, Correction in Sentences, Idioms and their meanings, Spell Checks, Adjectives, Articles, Prepositions, Direct and Indirect Speech, Active and Passive Voice, Correction in Sentences, etc.</p>	5
4	<p><b>ਪੰਜਾਬੀ:-</b></p> <p>ਸ਼ੁੱਧ-ਅਸ਼ੁੱਧ, ਸ਼ਬਦਜੋੜ, ਅਗੇਤਰ ਅਤੇ ਪਿਛੇਤਰ, ਸਮਾਨਾਰਥਕ/ਵਿਰੋਧੀ ਸ਼ਬਦ, ਨਾਂਵ, ਪੜਨਾਂਵ ਅਤੇ ਕਿਰਿਆ ਦੀਆਂ ਕਿਸਮਾਂ ਤੇ ਸਹੀ ਵਰਤੋਂ, ਲਿੰਗ ਅਤੇ ਵਚਨ, ਪੰਜਾਬੀ ਅਖਾਣ ਤੇ ਮੁਹਾਵਰੇ, ਅੰਗਰੇਜੀ ਤੋਂ ਪੰਜਾਬੀ ਅਨੁਵਾਦ ਅਤੇ ਬਹੁਤੇ ਸ਼ਬਦਾਂ ਦੀ ਥਾਂ ਇੱਕ ਸ਼ਬਦ ਆਦਿ।</p>	5
	<b>Maximum Marks</b>	30

Note:-a) The distribution of marks/question in each section is indicative. It may vary slightly.

b) The syllabus is broadly classified as above but may vary to some extent.