

Annexure "AU"

Syllabus for Written Test for the post of Veterinary Pharmacist

Marks: 120

No. of Questions: 120

Time: 02:00 Hours

S.No.	Subject/Topic	Total number of questions
A. Aptitude(60)		
1.	General English	15
2.	General Knowledge and current affairs (India)	15
3.	General Knowledge with special reference to J&K	5
4.	Numerical and Reasoning Ability	15
5.	Basic Concepts of Computers	10
	Total Marks (Aptitude)	60
B. Subject Related(60)		
1	ANIMAL DIVERSITY I	10
2	ANIMAL DIVERSITY II	10
3	ANIMAL DIVERSITY III	10
4	COMPARATIVE PHYSIOLOGY & ANATOMY	10
5	EVOLUTION	10
6	IMMUNOLOGY	10
	Total Marks (Subject Related)	60
	Grand Total(A+B)	120

DETAILED SYLLABUS

1. GENERAL ENGLISH

- Articles
- Clauses
- Pronouns
- Homonyms/ homophones
- Tenses
- Clauses
- Punctuation
- Synonyms and antonyms
- Analogies
- Idioms and Phrases
- Uses of prepositions

2. GENERAL KNOWLEDGE AND CURRENT AFFAIRS (INDIA)

- Important dates in Indian History/Freedom Struggle, different dates and events
- First in world (Adventure, Sports, Discoveries).
- First in India (Adventure, Sports, Discoveries)
- Popular names of Personalities (Religion, Politics, Scientific discoveries, Geographical, Sports, History)
- The Newspaper world - (Current Dailies & Weeklies of India)
- Books & Authors – General
- Famous Places in India
- Languages
- Capitals & Currencies
- United Nations Organizations - Veto Powers, No. of Countries as its Members Principal organs and their functions
- SAARC, ASEAN
- Everyday Science
- World famous Awards - (1. in Science)
(2. in Literature)
(3. in Sports)
- National Awards (1. in Science)
(2. in Literature)
(3. in Sports)
- The world of Sports
- Climate & Crops in India
- Constitution of India (Formation, Fundamental rights, Directive Principles).
- Democratic institutions
- Forms of Government
- Political & Physical divisions of world & India
- Important rivers & Lakes in India
- Current Events of National and International Level
- Agriculture in economic development; Industrialization and economic development
- Centrally Sponsored Schemes-Guidelines and Objectives
- Indian Foreign Trade

3. GENERAL KNOWLEDGE WITH SPECIAL REFERENCE TO J&K

- Abbreviations, Important dates, popular names of personalities and their achievements/Contribution (National and International)
- Weather, Climate, Crops, Means of Transport Important power projects and their impact on J&K Economy
- Rivers and Lakes
- Important Tourist Destinations
- History of J&K - Historical places of the J&K and their importance
- RTI Act
- Indus Water Treaty and its impact on economy
- Agriculture in Economic Development, industrialization and economic Development.
- Current events of Local, National and International Importance.

4. NUMERICAL AND REASONING ABILITY

The candidates will be tested primarily on the fundamental mathematical concepts and application oriented reasoning. The broad areas will include the following:

Basic Arithmetic:

- Number System
- Percentage
- Average
- Profit & Loss
- Ratio & Proportion
- Speed, Distance and Time
- Mathematical reasoning
- Basic Algebra
- Mensuration
- Decimal Fractions
- Simple and Compound Interest
- Trigonometry
- Simplification

Reasoning ability:

- Number series
- Letter series
- Coding decoding

- Direction sense
- Blood relations
- Statements and conclusions
- Logical Reasoning
- Mental Reasoning
- Sequential output tracing
- Assertions and reasons
- Arithmetical Operations

5. BASIC CONCEPTS OF COMPUTERS

The candidates' understanding of the concepts of computers and its application will be tested and it will broadly cover the following:

- Computer terminology
- Hardware and Software
- Input and Output Devices
- MS word and MS Excel
- Storage and Operating systems
- Safety and Security
- E-mail and Internet Usage
- Search Engines

6. SUBJECT RELATED SYLLABUS

ANIMAL DIVERSITY I

UNIT 1

1.1 Protista: General characters and classification up to classes; Locomotion in Protozoa

1.2 Porifera: General characters and classification up to classes; Canal System

1.3 Cnidaria: General characters and classification up to classes; Polymorphism in Hydrozoa

1.4 Helminthes: General characters and classification up to classes of platyhelminthes and nemathelminthes; Life history of *Taenia solium* and *Ascaris lumbricoides*; parasitic adaptations

1.5 Annelida: General characters and classification up to classes; Filter feeding in Polychaetes

ANIMAL DIVERSITY II

UNIT 2

2.1 Arthropoda: General characters and classification up to classes; Vision in Arthropoda, Metamorphosis in Insects

2.2 Mollusca: General characters and classification up to classes; Torsion in gastropods

2.3 Echinodermata: General characters and classification up to classes; Water-vascular system in Asteroidea

2.4 Urochordates: General features and classification; Phylogeny of Protochordata

2.5 Cephalochordates: General features and classification

ANIMAL DIVERSITY III

UNIT 3

3.1 Pisces: General features and Classification up to orders; Osmoregulation

3.2 Amphibia: General features and Classification up to orders; Parental care

3.3 Reptiles: General features and Classification up to orders; Poisonous and non-poisonous snakes

3.4 Aves: General features and Classification up to orders; Flight adaptations

3.5 Mammals: General characters and Classification up to orders; adaptive radiation

COMPARATIVE PHYSIOLOGY & ANATOMY

UNIT 4

4.1 Digestive System: Brief account of alimentary canal and digestive glands

4.2 Digestion: Physiology of digestion; Absorption of carbohydrates, proteins and lipids

4.3. Respiration & Respiratory System: Pulmonary respiration, Respiratory volumes and capacities, Transport of Oxygen and carbon dioxide in blood, types of respiratory pigments, oxygen dissociation curves; Brief account of Gills, lungs, air sacs and swim bladder

4.4 Excretion & Excretory System: Formation and excretion of nitrogenous wastes; Evolution of kidney and urinogenital ducts

4.5. Nervous System & Sense Organs: Comparative account of brain; Different types of potentials, action potential and its propagation in different nerve; Fibres; Different types of receptors, Physiology of vision; Physiology of hearing

EVOLUTION

UNIT 5

5.1 Introduction to Evolutionary Theories: Lamarckism, Darwinism, Neo-Darwinism

5.2 Evidences of Evolution: Types of fossils, Dating of fossils, Phylogeny of horse

5.3 Processes of Evolutionary Change: Organic variations; Isolating Mechanisms; Natural selection, Industrial melanism

5.4 Natural Selection: Directional, Stabilizing and Disruptive selection, Artificial selection

5.5 Species Concept: Biological species concept; Modes of speciation (Allopatric, Sympatric)

IMMUNOLOGY

UNIT 6

- 6. 1.** Basic properties of antigens; B and T cell epitopes and adjuvants;
- 6.2.** Structure, classes and function of antibodies, monoclonal antibodies;
- 6.3.** Antigen antibody interactions as tools for research and diagnosis.
- 6.4.** Structure and Functions of MHC; Exogenous and endogenous pathways of antigen presentation and processing;
- 6.5.** Basic properties and functions of cytokines; Complement system: Components and pathways