(Model Question Paper)

Part 1- Biological Sciences

Paper 1: Basic Concepts of Ayurveda and Sanskrit

Time-3 Hours Max Marks: 100

Answer any Two

- 1. What are adharaneeya vegas? Mention the diseases occurring due to Avarodha of Mootra vegas.
- 2. Different sthanas of Vata, Pitta and Kapha. Explain functions of Panchavidha Pitta.
- 3. Write in brief Mootra varga. Which is the best in them and why? What are the characteristics of lavana varga. (2x10)

Answer any Eight

- 1. What are the saptavidha ahara kalpanas?
- 2. Explain the features of Adhana kala
- 3. Mention Manodosha and its general line of treatment.
- 4. In brief, explain vyayama
- 5. What is Alasaka?
- 6. Define Vishoochika and mention its treatment.
- 7. Gunas of Ghritam.
- 8. Explain the features of uttarayana
- 9. What is Anupana? Give examples.
- 10. Properties of Diwaswapna and its contraindications.

(8x5)

Answer any Five

- 1. Mention types of Dravyas.
- 2. What is Anupana?
- 3. What is Ritu-sandhi?
- 4. Features of Rasa kshay and Rakta kshay.
- 5. What is Viruddha Ahara?
- 6. What is Alasaka? (5x3)

PART - B (Sanskrit)

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(Model Question Paper)

Part 1- Biological Sciences

Paper II: Sareera Vijnanam

Time-3 Hours Max Marks: 100

Answer any Two

- 1. What is bone? What are the parts of hip bone with diagram?
- 2. Define Garbha as per Sushrut and modern. Explain garbhotpadaka bhavas.
- 3. What are blood cells. Explain erythropoeises and write about the function of RBC.

(2x10)

Answer any Ten

- 1. What is the joint? Explain the ligaments of knee joint with figure.
- 2. What is Shadangatva?
- 3. Explain the parts of Humerus with diagram.
- 4. Write the internal features of Kidney.
- 5. Explain the formation of Urine.
- 6. What are the functions of Spinal cord.
- 7. Describe the Cardiac cycle.
- 8. What are the enzymes secreted from the stomach and its role in digestion?
- 9. Define shareera and its importance.
- 10. Explain respiratory mechanism.
- 11. What are functions of bile juice?

(10x5)

Write short notes on (Any Ten)

- 1. Blood supply to spleen.
- 2. Oja dhatu
- 3. Functions of skin
- 4. Greater omentum.
- 5. Pitta dosha prakara
- 6. Agni
- 7. Pituitary gland
- 8. Physiology of Eye
- 9. Kostha
- 10. Sweda
- 11. Basalic vein (10x3)

(Model Question Paper)

Part II- Pharmaceutical Chemistry

Paper III: Pharmaceutical Chemistry

Time - 3 Hours Max Marks: 100

Answer any **Two**

- 1. Explain the resonance theory of Benzene. Explain Friedal craft's acylation of Benzene.
- 2. Write any three chemical reactions of alcohols. How will you distinguish between primary, secondary and tertiary amines?
- 3. Explain the following reactions of aldehydes
 - i) Oxidation reaction
 - ii) Nucleophilic addition reaction

Explain any two general methods of preparation of Ketones.

(2x10)

Answer any Ten

- 1. Explain Baeyer's strain theory.
- 2. Explain inductive effect.
- 3. Explain the following
 - i) Carbylamine reaction
 - ii) Anti-Markonikov addition
- 4. Write notes on Covalent bond and Sp2 hybridization
- 5. Write any two general methods of preparation of nitro compounds.
- 6. Explain acid and alkali hydrolysis of ester.
- 7. Explain any two identification tests for aldehydes.
- 8. Explain mechanism of esterification.
- 9. Write notes on Hydrogen bond and Hyperconjugation.
- 10. Explain Satzeff's rule with an example.
- 11. Explain ozonolysis of alkenes.

(5x10)

Answer the following (Any Ten)

- 1. Write short note on Boiling point
- 2. Explain with reaction mechanism Halogenation of benzene
- 3. Draw the structural formula for
 - i) 2-Methyl-1-butene
 - ii) 1-Chloro-2-methylpropane
- 4. Write short note on Melting point

5. Draw the structural formula for

- i) 5-Oxohexanoic acid
- ii) 2-Chloro-3methylpentane
- 6. Explain with reaction mechanism Sulphonation of benzene.
- 7. Write short notes on Rosenmund reduction.
- 8. Write short notes on SN2 mechanism.
- 9. What is hydrogen bonding.
- 10. Write notes on Saponification
- 11. Write notes on Transesterification.

(3x10)

(Model Question Paper)

Part II- Pharmaceutical Chemistry

Paper IV: Pharmaceutical Analysis

Time - 3 Hours Max Marks: **100**

Answer any Two

- 1. Explain the types of errors and methods avoiding errors in pharmaceutical analysis in detail.
- 2. Enlist various steps in gravimetry. Explain each step in brief.
- 3. Explain the titration curve for ferrous ammonium sulphate Vs feric ammonium sulphate.

(2x10)

Answer any Ten

- 1. Explain the theories of acid base indicators in brief.
- 2. Classify redox indicators with suitable examples.
- 3. Explain the term significant figure. Give the rules for retaining significant figure.
- 4. Enlist the advantages of ceriometry over permangnometry.
- 5. Give the requirements for and ideal primary standard with suitable examples.
- 6. Explain the principle of Karl Fischer titration with suitable examples.
- 7. List the advantages of organic precipitants.
- 8. Classify solvents used in non aqueous titrations.
- 9. Give the requirements of ideal primary standard. Give suitable examples.
- 10. Explain Fajan's method for the estimation of halides.
- 11. Give conditions for successful iodometry.

(5x10)

Answer any Ten

- 1. Define the term indictors. Classify them suitable examples.
- 2. Write about any three metal ion indicator.
- 3. Explain in brief gasometric assay of carbon dioxide.
- 4. Write note on kjeldhal method for nitrogen estimation
- 5. Write about diazotization method.
- 6. Explain principle of modified Mohr's method.
- 7. Write the principle involved in the assay hydrogen peroxide IP.
- 8. Explain preparation and standardization 0.1N Sodium thiosulphate solution.
- 9. Under what circumstances back titrations in complexometry.
- 10. Write and explain terms in Nernt's equation.
- 11. Explain the principle for the assay of drugs estimated using titanous chloride. (3x10)

(Model Question Paper)

Part III- Pharmaceutical Biology

Paper V: Pharmaceutical Biology

Time - 3 Hours Max Marks: 100

Answer any Two

- 1. Define fleshy fruits. Classify and explain them with example. With the help of neat labeled diagram explain the anatomy of dorsiventral leaf.
- 2. With the help of neat labeled diagram explain the life cycle of malarial parasite. Explain the three different classes of phylum porifera.
- 3. Define root with the help of neat labeled diagram explain the different regions of the root system. Explain the different types of leaf apex. (2x10)

Answer any Ten

- 1. Write short notes on Trichomes and Conducting tissue.
- 2. Write short notes on organ products as a raw material of drugs of animal origin.
- 3. Describe classes, characteristics and examples of Phylum Arthropoda.
- 4. Write short notes on Snail and Leishmania.
- 5. Draw a neat labeled diagram of plant cell and explain various oraganelles present in it.
- 6. Describe the diagnostic characters of family Liliaceae with examples.
- 7. Write a brief account on method of classification of plant kingdom.
- 8. Bring out the difference between frog and toads.
- 9. With the help of neat labeled diagram explain fasciola hepatica as a parasitic nematode.
- 10. Write short note on Stomata and Dehiscent capsular fruits.
- 11. Explain Parenchyma and False fruits.

(5x10)

(3x10)

Answer any Ten

- 1. Write notes on Entamoeba.
- 2. Write differences between Hypogynous and perigynous flower,
- 3. Write a note on Corals
- 4. Write source, active constituents and uses of a medicinal plant belonging to family Compositae.
- 5. Write four charaters of phylum Chordata.
- 6. Write note on Porifera.
- 7. Write the difference between Sclerenchyma and Collenchyma.
- 8. Write unique features of phylum Mollusca.
- 9. Draw a labeled diagram of Liver fluke.
- 10. Write difference between endospermic and non endospermic seeds
- 11. Write a note on Seedless fruits.

(Model Question Paper)

Part IV- Basic electronics and computer application

Paper VI

Time - 3 Hours Max Marks: **100**

Answer any Two

- 1. Explain the types of conventional languages along with its advantages and disadvantages.
- 2. Explain different extrinsic semiconductors with proper examples.
- 3. Explain major classifications of memory in detail with examples. (2x10)

Answer any Ten

- 1. Write a note on MS Office.
- 2. Explain the need for computers in pharmacy.
- 3. Explain logical and arithmetic operators.
- 4. Explain Half wave Rectifier with neat labeled diagram.
- 5. Distinguish between intrinsic and extrinsic semiconductors. Give one example for each.

(5x10)

- 6. Explain RAM and ROM.
- 7. Explain any 5 internal and 5 external DOS commands.
- 8. Define data structures. Explain the abstract data types with its characteristics.
- 9. Write a note on different types of computers and its uses.
- 10. Define trees. Discuss its usage in different applications.
- 11. What is character set? Write rules for naming the variables.

Write short notes: (Any **Ten**)

- 1. Photodiode
- 2. Print control statements
- 3. Arithmetic and relations expressions
- 4. Parts of MS Word and MS Excel windows
- 5. Unix operating system
- 6. Features of C programming language
- 7. Analogue and digital computers
- 8. PASCAL and FORTAN
- 9. Ordered list and linked list
- 10. Abacus and PASCAL's calculator
- 11. LET, INPUT, READ, DATA AND Print statements. (3x10)