**Code No.E-12026/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I – Semester (CBCS) (Backlog) Examination, November 2022**
**Subject: Human Anatomy and Physiology – I**

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer any five questions. All questions carry equal marks.**

1 (a) Explain in detail about the structure and functions of cell with a neat labeled diagram.
(b) Differentiate the types of muscular tissues.

2 (a) Define tissue and explain in detail about epithelial tissues.
(b) Differentiate between simple and facilitated diffusion.

3 (a) What is a Joint? Explain different types of synovial joints with examples.
(b) Explain the structure and functions of typical vertebrae with diagram.

4 (a) Discuss the various types of movements of joints.
(b) Write about skeletal muscle structure in detail.

5 (a) Define haemopoiesis and explain in detail about haemopoiesis.
(b) Write about the composition and functions of plasma.

6 (a) Explain the structure and functions of spleen with a neat labeled diagram.
(b) What are the different types of lymph trunks and ducts involved in draining of lymph.

7 (a) Define and explain the events of cardiac cycle.
(b) Explain about the coronary circulation of blood.

8 (a) Describe the anatomy of heart with a neat labeled diagram.
(b) Define ECG and in detail about ECG.

9 (a) Explain the structure of ear with a neat labeled diagram.
(b) Write short notes on pathway of gustation.

10 Write in detail about the structure and functions of skin.

* * *

**Code No: E-12029/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I Semester (CBCS) (Backlog) Examination, November 2022**

**Subject: Pharmaceutical Organic Chemistry-I**

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer any five questions.**
**Draw neat and labelled diagrams where ever necessary**

1. Explain (i) Effect of Intermolecular forces (ii) Solubility and polarity of molecules (iii) Mesomerism

2. Write about (i) Inductive effect (ii) Resonance (iii) electronic effects

3. (i) Explain Sachse-Mohr theory (ii) Electrophilic addition reactions

4. (i) Explain the configuration of cycloalkanes (ii) Free radical reactions

5. Write about (i) Mechanism of SNI and SN2 reactions (ii) Stability of conjugated dienes

6. (i) Write about Williamson's synthesis and Zeisel's method in detail (ii) Sayetzeff's rule

7. Write the reaction, mechanism and applications of
   (i) Aldol condensation (ii) Reformatsky reaction

8. (i) Explain about Nucleophillic substitution reactions of carboxylic acids (ii) Explain about Aceto acetic ester synthesis?

9. (i) Write about basicity of Amines?
   (ii) Write about preparation methods of Diazonium salts?

10. (i) Explain E1 and E2 reactions in detail
    (ii) Write about method of preparation of Alkyl halides?

*****

**Code No: E-12025/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I Semester (CBCS) (Backlog) Examination, November 2022**
**Subject: General Pharmacy**

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer any five questions:** **(4x17 ½ =70Marks**)

1. (a) Write a note on pharmacy as a career.
   (b) Write short notes on Martindale E

2. Explain Indian Paharmacopoeia and describe each term of monograph of API by providing an example of drug.

3. (a) What are isotonic solutions and explain the methods of adjusting tonicity
   (b) Write a note on minimum weighable amounts and calibration of weights

4. (a) Prepare 500ml of 60% alcohol from 90%, 60% 40% alcohol and water.
   (b) Convert 60% and 40% alcohol to proof strength

5. (a) If adult dose of a drug is 750mg. Calculate the dose for
   (i) 3 months old infant (ii) 3 years child (iii) 7 years child (iv) 12 years boy
   (b) Write short notes on pricing of prescription.

6. (a) Define prescription. Write a note on parts of prescription with example.
   (b) Describe the sources of errors in prescription.

7. (a) Describe different types of containers and closures.
   (b) Write about cautionary labels for different formulations.

8. (a) Describe the materials used in preparation of containers.
   (b) What are the ideal properties of a container?

9. (a) Explain in detail about hydrocolloids and surfactants.
   (b) Discuss in brief about containers and uses of official medicinal gases.

10. (a) Describe therapeutic and diagnostic uses of radio pharmaceuticals.
    (b) Explain in detail about colouring agents and sweetening agents.

*****

**Code No: E-12024/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I Semester (CBCS) (Backlog) Examination, November 2022**
**Subject: Basic Computer Applications - I**

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer any five questions. All questions carry equal marks.**

1. a) Write about basic structure and characteristics of computers.
   b) List out the commonly used Input and Output devices of computer? Write about MICR and OCR.

2. (a) Write briefly on different types of printers.
   (b) What is operating system? Explain briefly about the importance and functions of operating system.

3. Write briefly on the following in MS-Word
   (i) Formatting text (ii) Tables (iii) Spellings and Grammar (iv) Mail Merge

4. (a) Write the features available in MS-Excel.
   (b) Explain different types of charts and graphs with MS-Excel data.

5. (a) Write about the features of MS-Power Point.
   (b) Write notes on (i) Background (ii) Transitions and Animations

6. (a) Write briefly on the following in MS-Access
   (i) Sorting and filtering (ii) Table relationships (iii) Importing and Exporting

7. Explain the following
   (i) Structure and organization of WWW (ii) Search Engine
   (iii) types of indexing tools and search strategies (iv) E-Mail

8. Explain the following
   (i) Browsers (ii) Information search in WWW
   (iii) Pharmaceutical resources in WWW

9. (a) What is HTML? Write about the basic structure of HTML and different tags in HTML.
   (b) Write a note on frames in HTML.

10. Write briefly on the following in HTML.
    (i) Text formatting (ii) Hyperlinks (iii) Lists and Tables.

*****

**Code No: E-12023/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I Semester (CBCS) (Backlog) Examination, November 2022

## Subject: Pharmaceutical Inorganic Chemistry

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer any five questions. All questions carry equal marks.**

1 Explain the principle and procedure involved in the limit tests for sulphates and iron.

2 List out various sources of impurities and explain any three of them.

3 What are electrolyte replenishers? Give the preparation, assay, uses and official preparations of sodium chloride.

4 Write the preparation, properties, assay and uses of aluminum hydroxide gel and magnesium hydroxide mixture.

5 Write the preparation, tests for purity and uses of ferric ammonium citrate and sodium metabisulphite.

6 Give a brief note on: Silica gel and activated charcoal.

7 What are anti-infective agents? Write the preparation, properties, assay and uses of boric acid.

8 Write the preparation, properties and uses of sodium nitrite and zinc sulphate.

9 What are diagnostic agents? Explain the preparation, properties, assay and uses of barium sulphate.

10 Write the preparation, properties and uses of hydrogen peroxide and zinc oxide.

****

**Code No. D-8187/ CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I Semester (CBCS) (Backlog) Examination, March 2022**

**Subject: Basic Computer Applications - I**

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer any five questions. All questions carry equal marks.**
**(5 x 14 = 70 Marks)**

1 (a) Define Computer. Explain characteristics of computer.
(b) Write about Principles of Flow charting.

2 (a) What is Computer VIRUS? Explain about computer viruses.
(b) Explain the importance of Operating System.

3 Write short note on

(i) Tables in MS WORD (ii) Spelling & Grammar (iii) Lists in MS WORD.

4 Write short noes on

(i) Charts & Graphs in Excel (ii) Features of MS Excel.

5 (a) Explain different types of Views in MS Power Point.
(b) Explain about Slide Transition & Custom Animation.

6 (a) What is Database (DB)? How to create tables in MS ACCESS?
(b) Write brief note son Sort & filtering.

7 (a) Write the different types of indexing tools & Search strategies.
(b) Write about Search Engines & browsers.

8 (a) Write about Email, Information search in WWW.
(b) Write short notes on Structure & Organization of WWW.

9 (a) Write the structure of HTML & Elements (Tags) of HTML.
(b) Write short notes on Hyperlinks in HTML.

10 Write short notes on Lists & Tables in HTML.

****

**Code No. D-8186/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I Semester (CBCS) (Backlog) Examination, March 2022

### Subject: Pharmaceutical Inorganic Chemistry

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer any five questions. All questions carry equal marks.**
**(5 x 14 = 70 Marks)**

1 List out various sources of impurities and explain any four of them.

2 Explain the principle and procedure involved in the limit test for arsenic. Give a neat labeled diagram for the same.

3 Write the preparation, properties, tests for purity and uses of magnesium hydroxide mixture and sodium chloride.

4 Write the composition, mode of supply and uses of various types of dialysis fluids.

5 Give a brief note on: Activated charcoal and Bentonite.

6 What are haematinics? Write the preparation, properties and tests for purity of ferrous gluconate and sodium metabisulphite.

7 Write the preparation, properties, assay and uses of boric acid.

8 Define expectorants. Write the preparation, properties, assay and uses of any one expectorant.

9 Write the preparation, properties and uses of calcium carbonate and hydrogen peroxide.

10 Write a note on diagnostic agents.

****

**Code No. D-8189/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I Semester (CBCS) (Backlog) Examination, March 2022**

**Subject: Human Anatomy and Physiology - I**

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer any five questions. All questions carry equal marks.**
**(5 x 14 = 70 Marks)**

1 (a) Define tissue and explain in detail about the structure and functions of epithelial tissues with neat labeled diagrams.
(b) Define the following terms:
(i) Proximal (ii) Posterior (iii) Lateral (iv) Inferior.

2 (a) Explain the structure feature of a cell with neat labeled diagram.
(b) Define and explain the various types of active transport mechanism with examples.

3 (a) Explain the structure features of the following bones with neat labeled diagrams. (i) Scapula (ii) Typical Vertebra.
(b) Classify joints and discuss the various types of synovial joints

4 (a) Write about the process of muscle contraction in detail.
(b) Write short notes on special movements of synovial joints.

5 Define haemostasis and explain in detail about haemostasis. Mention the clotting factors.

6 (a) Explain the structure and functions of spleen with a neat labeled diagram.
(b) Write about different types of white blood cells.

7 (a) Define and explain the events of cardiac cycle.
(b) Explain the anatomy of the heart with neat labeled diagram.

8 (a) What is meant by blood pressure and write a short note on the regulation of blood pressure?
(b) Define ECG and correlate ECG with the events of cardiac cycle.

9 (a) Explain the structure of eye with a neat labeled diagram.
(b) Write short notes on physiology of taste buds.

10 (a) Explain the physiology of hearing.
(b) Write in detail about the functions of skin.

****

**Code No. D-8188/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I Semester (CBCS) (Backlog) Examination, March 2022

### Subject: General Pharmacy

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer any five questions. All questions carry equal marks.**
**(5 x 14 = 70 Marks)**

1 (a) Write a note on evolution of pharmacy.
(b) Describe the Pharmacopoeial monograph contents according to IP.

2 (a) Write a note on development of pharmaceutical industry in India.
(b) Describe the role of PCI in pharmaceutical education.

3 (a) Find the concentration of sodium chloride required to make 50ml of isotonic solution containing 0.5% Ephedrine Hcl and 0.5% Chlorobutol.
(Freezing point of 1% w/v solution of Ephedrine hcl is -0.165˚C;
Freezing point of 1% w/v solution of Chlorobutol is -0.138˚C)
(b) How many grams of sodium chloride is required to prepare 500ml of 0.01N solution.

4 (a) Define Normality, Molarity, Molality.
(b) Convert 30˚UP and 45˚OP into %v/v alcohol.
(c) Prepare 500ml of 40% alcohol from 60% alcohol and water.

5 (a) Define posology. Write a note on factors influencing calculation of dose.
(b) What is the dose for child of 7yrs old if adult dose is 800mg?

6 (a) Define prescription. Write a note on care required in handling prescriptions.
(b) Describe the sources of errors in prescription.

7 (a) Describe labelling requirements with examples of cautionary and advisory labels.
(b) Write a note on modern unit dose packaging.

8 (a) Describe the storage conditions for pharmaceutical products.
(b) Describe glass as packaging material.

9 (a) Write a note on official medicinal gases handling and storage.
(b) Write a note on antioxidants.

10 Write a note on Radio Pharmaceuticals preparation and diagnostic uses.

****

**Code No. D8088/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I Semester (CBCS) (Backlog) Examination, December 2021**

**Subject: Pharmaceutical Inorganic Chemistry**

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions:** **(4 x 17½ =70Marks)**

1. Explain the principle and procedure involved in the limit tests for chlorides and sulphates.

2. Classify inorganic pharmaceuticals based on their therapeutic appications with examples.

3. What are electrolyte replenishers? Give the prepration, assay, uses and official preparations of calcium gluconate.

4. Write the preparation, properties, assay and uses of ammonium chloride and aluminum hydroxide gel.

5. Write the preparation, tests for purity and uses of magnesium stearate and ferric ammonium citrate.

6. Give a brief note on: Antioxidants and Silica ge.

7. What are anti-infective agents? Write the preparation, properties, assay and uses of iodine.

8. Write the preparation, properties and uses of sodium thiosulphate and calamine.

9. Write the preparation, properties and uses of plaster of paris and hydrogen peroxide.

10. What are diagnostic agents? Explain the preparation, properties, assay and uses of barium sulphate.

*****

**Code No. D8092/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I Semester (CBCS) (Backlog) Examination, December 2021

### Subject: Mathematics

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions.** **(4 x 17 ½ = 70 Marks)**

1 (a) Solve for $x\log_{27} x+\log_9 x+\log_3 x=11$.

(b) Prove that $Tan(\theta+135^\circ)Tan(\theta-135^\circ)=-1$.

2 (a) If $A=\frac{4}{5}$ and $B=\frac{5}{13}$ find the value of $\sin(A+B)$ and $\cos(A+B)$.

(b) Solve the equation $\log x+\log(x-1)=\log(3x+12)$.

3 (a) Evaluate $\lim_{x\to 2}\frac{\sin(x-2)}{x^2-4}$.

(b)Find the derivative of $\sin x$ w.r.t $x$ by using first principle.

4 (a) $y=3x^3-4x^2+2x+1$ find $\frac{dy}{dx}$.

(b) If $=x^3y^2-y\sin x$ then find $\frac{\partial u}{\partial x},\frac{\partial u}{\partial y}$.

5 (a) Evaluate $\int\frac{(ax^3+bx^2+(x+d)}{x}dx$.

(b) Evaluate $\int\frac{2x^3}{1+x^8}dx$.

6 (a) Evaluate $\int x.\sin x\,dx$.

(b) Find the area bounded by curves $y=\sqrt{x}, y=x^2$.

7 (a) If $A=\begin{bmatrix}1&2&3\\3&2&1\end{bmatrix}$ and $B=\begin{bmatrix}3&2&1\\1&2&3\end{bmatrix}$.

(b) If $A=\begin{bmatrix}3&-3&4\\2&-3&4\\0&-1&1\end{bmatrix}$ then find $\overset{-1}{A}$.

..2..

8 (a) If $A=\begin{bmatrix}2 & -1 & 2\\ 1 & 3 & -4\end{bmatrix}$ and $B=\begin{bmatrix}1 & -2\\ -3 & 0\\ 5 & 4\end{bmatrix}$ then verify that $(AB)^T = B^T A^T$.

(b) Solve $\begin{matrix}2x+3y-1=0\\ 3x-y+2=0\end{matrix}$ by Cramer's rule.

9 Explain Linear and non-linear graphs and give examples.

10 (a) Find the order and the degree of the differential equation $\frac{d^2y}{dx^2}+\left(\frac{dy}{dx}\right)^2+xy=0$.

(b) Solve $\sec^2 x\,Tany\,dx+\sec^2 y\,Tanx\,dy=0$.

****

**Code No. D8093/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I Semester (CBCS) (Backlog) Examination, December 2021

**Subject: Biology**

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions. All questions carry equal marks.**

**(4 x 17 ½ = 70 Marks)**

1 (a) Explain various cell inclusions present in plant cell.
(b) Explain histology of leaf with neat labeled diagram.

2 (a) Write a note on plant cell with neat labeled diagram.
(b) Write a descriptive note on parenchyma tissues.

3 (a) Write a note on stem and its modification.
(b) Give various morphological characters of fruits.

4 (a) Write a note on various types of leaf modification with examples.
(b) Explain morphology of root with neat labeled diagram.

5 (a) Give the various taxonomical characters of Solanaceae family.
(b) Explain taxonomical characters of Scrophulariaceae family.

6 (a) Write a note on taxonomical characters of Apocynaceae family.
(b) Give various taxonomical characters for Umbelliferae family.

7 (a) Write a note on meiosis with neat labeled diagram.
(b) Explain histology of smooth muscle with neat labeled diagram.

8 (a) Explain histology of animal liver with neat labeled diagram.
(b) How will you differentiate animal cell from plant cell.

9 (a) Write a note on morphological characters and life history of Ascaris.
(b) Explain life history of mosquitoes as disease spreading agent.

10 (a) Explain life cycle of Trypanosoma.
(b) Give life cycle of tape worm with neat labeled diagram.

****

**Code No. D8091/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, December 2021

**Subject: Human Anatomy and Physiology – I**

**Time: 2 Hours** **Max. Marks: 70**

***Note: Answer any four questions.*** ***(4 x 17 ½ = 70 Marks)***

1 Define tissue and explain in detail about the structure and functions of connective tissues with neat labeled diagrams.

2 (a) Explain the structure and functions mitochondria and ribosomes with a neat labeled diagram.
(b) Write about the following directional terms:
(i) Inferior (ii) Rostral (iii) Dorsal (iv) Lateral.

3 Explain the structure and functions of the following bones with neat labeled diagrams.
(i) Lumbar Vertebra (ii) Pelvic girdle (iii) Sternum (iv) Femur.

4 (a) Write about the process of muscle contraction in detail.
(b) Write short notes on neuromuscular junction.

5 (a) Explain about different types of blood groups.
(b) Write short note on WBCs.

6 (a) Explain the structure and functions of spleen with a neat labeled diagram.
(b) Write about the functions and composition of lymph.

7 (a) Define and explain the events of cardiac cycle.
(b) Explain the conducting system of the heart.

8 (a) What is meant by blood pressure and write about hormonal regulation of blood pressure.
(b) Define ECG and in detail about ECG.

9 (a) Explain the structure of eye with a neat labeled diagram.
(b) Write about the anatomy of taste buds.

10 (a) Explain the physiology of hearing.
(b) Write in detail about the structure of skin.

* * *

**Code No: D8090/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I – Semester (CBCS) (Backlog) Examination, December 2021**

**Subject: General Pharmacy**

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions.** **(4 x 17½ = 70 Marks)**

1 a) Explain the pharmacopeial monograph contents, with an example of API.
b) Write a note on Pharmaceutical Educational Bodies

2 a) Write a note on IP and USP
b) Write a note on Merck Index

3 a) Write in detail about Isotonic Solutions and methods of adjusting Isotonicity
b) Find the concentration of sodium chloride required to make 100 ml of isotonic solution containing 0.5% Ephedrine Hydrochloride and 0.5% Chlorobutol
(Given :
Freezing point of 1% w/v solution of Ephedrine Hydrocholoride is -0.165.
Freezing point of 1% w/v solution of Chlorobutol is -0.138)
c) Write a note on Allegation Method.

4 a) Find the strength of 50% 75% alcohol in terms of Proof Spirit and Calculate the real strength of 10 O.P. and 50U.P.
b) Calculate the amount of dextrose required to prepare 250ml of 5% w/v solution
c) Calculate the amount of 90%, 60%, 30% and 10% alcohol required to produce 50% alcohol.

5 a) Define Prescription. Explain different parts of Prescription and source of errors in the prescription.
b) Calculate the dose for a child of 10kg body weight, when the adult dose of a drug is 100mg.

6 a) Define Posology. Explain any 8 factors influencing Posology.
b) Write a note on different formulas used to calculate child doses according to their age and body weights

7 a) Write a note on the cautionary and Advisory Labels
b) Classify different types of containers and closures and describe them.

8 Define container and Closure. Explain different materials used in the preparation of Containers and Closures.

9 Write a note on
i) Flavoring Agents ii) Coloring Agents iii) Vehicles

10 a) Explain various therapeutic and diagnostic uses of Radiopharmaceuticals.
b) Write in detail about surfactants and Hydrocolloids.

*******

**Code No. D8089/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I Semester (CBCS) (Backlog) Examination, December 2021

### Subject: Basic Computer Applications - I

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions.** **(4 x 17½ = 70 Marks)**

1 (a) Draw the block diagram of the computer and explain the components of computer.
(b) Describe about different types of memory chips.

2 (a) What is printer? Write briefly on different types of printers.
(b) What is Virus? How it will affect the computer? How can we protect the computer from computer viruses?

3 (a) Write the features available in MS-Word.
(b) Write briefly about creating, editing and formatting text in MS-Word.

4 (a) Write the mathematical and statistical functions in MS-Excel.
(b) Write about different types of charts and graphs in MS-Excel.

5 (a) Write about the features of MS-Power Point.
(b) Write notes on (i) Views (ii) Templates (iii) Transitions and Animations.

6 Explain about database preparation, Queries, Sorting & filtering and table relationships in MS-Access.

7 Explain the following:
(a) Structure and organization of WWW
(b) Browsers
(c) Information search in WWW
(D) Search Engines.

8 Explain the following:
(a) Types of indexing tools and search strategies
(b) Pharmaceutical resources in WWW
(c) E-Mail.

9 Write briefly on the following in HTML
(a) HTML structure
(b) Elements (Tags)
(c) Text formatting
(d) Hyperlinks.

10 Write briefly on the following in HTML
(a) HTML Tags
(b) Tables and Colors
(c) Frames and Forms.

****

**Code No. 12272/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I Semester (CBCS) (Backlog) Examination, July 2021

### Subject: Pharmaceutical Inorganic Chemistry

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions. All questions carry equal marks. (4 x 17 ½ = 70 Marks)**

1 What are limit tests? Explain the principle and procedure involved in the limit test for arsenic with a neat labeled diagram.

2 Classify inorganic pharmaceuticals based on their therapeutic applications with examples.

3 Write the composition, mode of supply and uses of haemodialysis and peritoneal dialysis fluids.

4 Write the preparation, properties, tests for purity and uses of sodium chloride and aluminium hydroxide gel.

5 What are haematinics? Write the preparation, properties and tests for purity of ferrous sulphate and ferrous gluconate.

6 Give a brief note on: Bentonite and antioxidans.

7 What are expectorants? Write the preparation, properties, assay and uses of potassium iodide.

8 What are anti-infective agents? Writ the preparation, properties, assay and uses of potassium permanganate.

9 Write the preparation, properties and uses of barium sulphate and calcium carbonate.

10 Discuss briefly about surgical aids and antithyroid agents.

****

**Code No. 12276/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I Semester (CBCS) (Backlog) Examination, August 2021

### Subject: Mathematics

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions. All Questions carry equal marks. (4x17 1/2 = 70 Marks)**

1 (a) Find $x$ if $2\log_a 4 + \log_a 5 - \log_a 10 = \log_a x$.

(b) If $(2m+1)\sin\theta = 2m(m+1)\cos\theta$, then find the values of $\sin\theta$ and $\cos\theta$ they are positive.

2 (a) If Tan $\alpha = \frac{1}{8}, Tan\ \beta = \frac{7}{9}$ find the value of $\alpha + \beta$ if $0° < \alpha + \beta < 360°$.

(b) Find $x$ if $4\log x = 2\log x + \log 4 + 2$.

3 (a) Show that $\lim_{x\to 0} \frac{\cos ec\ x - \cot x}{x} = \frac{1}{2}$.

(b) To find the derivative of Tan $x$ w.r.t. $x$ by using first principle.

4 (a) If $u = f\left(x^2 + y^2\right)$ then prove that $x\frac{\partial u}{\partial y} - y.\frac{\partial u}{\partial x} = 0$.

(b) Find $\frac{dy}{dx}$ if $y = \frac{x + \sin x}{x + \cos x}$

5 (a) Evaluate $\int \frac{x^8}{x^6 + 1} dx$.

(b) Evaluate $\int \sec^4 x\ Tan\ x\ dx$.

6 (a) Find the area bounded by the curves $y = 4x - x^2$ with $x - axis$.

(b) Evaluate $\int \frac{3x^2 + 7x + 12}{x^3} dx$.

7 (a) If $A = \begin{bmatrix} 1 & 2 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 1 \end{bmatrix}$ show that $A^2 - 4A - 5I = 0$

(b) If $A = \begin{bmatrix} -1 & -2 & -2 \\ 2 & 1 & -2 \\ 2 & -2 & 1 \end{bmatrix}$ find the inverse of the matrix.

8 (a) If $A = \begin{bmatrix} 7 & -2 \\ -1 & 2 \\ 5 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} -2 & -1 \\ 4 & 2 \\ -1 & 0 \end{bmatrix}$ then find $A.B^T$ and $B.A^T$

(b) Solve the system of equation

$x + 2y + 2z = 2$

$2x + 4y + z = 7$

$3x + 2y + 9z = 14$ .

9 (a) Explain Linear and non-Linear graphs with examples.
(b) Define the degree and order.

10 (a) Find the equation of the Line passing through the two points (3, 4) (7, -6).

(b) Solve $\frac{dy}{dx} - 2y = \cos 3x.$

****

**Code No. 12277/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I Semester (CBCS) (Backlog) Examination, August 2021

**Subject: Biology**

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions. All Questions carry equal marks. (4x17$^{1/2}$ = 70 Marks)**

1 (a) Explain various non-living cell inclusions present in plant cell.
(b) Explain histology of stem with neat labelled diagram.

2 (a) Write a note on plant kingdom systems.
(b) What do you mean by conducting tissues, give its types? Write the function of xylem.

3 (a) Write a descriptive note on root and its modification.
(b) Give various morphological characters of flowers.

4 (a) Write a note on various types of inflorescences with neat labelled diagram.
(b) Explain various morphological characters of leaf with neat labelled diagram.

5 (a) Give taxonomical characters of Apocynaceae family.
(b) Explain taxonomical characters of Solanaceae family

6 (a) Write a note on taxonomical characters of Umbelliferae family.
(b) Give various taxonomical characters for Leguminoceae family.

7 (a) Write a note on mitosis with neat labeled diagram.
(b) Explain histology of intestine with neat labeled diagram

8 (a) Explain histology of animal kidney with neat labeled diagram.
(b) Differentiate between plant cell and animal cell.

9 (a) Write a note on morphological characters and life history of plasmodium.
(b) Explain life history of house fly as disease spreading agent.

10 (a) Explain life cycle of Entamoeba histolytica.
(b) Write a note on life cycle of Ascaris with neat labelled diagram.

****

**Code No:12274/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, July 2021

### Subject : General Pharmacy

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any Four questions.** **($4x17^{1/2}$=70 Marks)**

1 a) Write a note on Pharmacy as a career
b) Write in detail about Pharmaceutical Education in India

2 a) Explain the pharmacopocial monograph contents, with an example of API and Formulation.
b) Write a short notes on Martindale.

3 a) Define Normality, Molarity, Molality
b) Write in detail about Isotonic Solutions and methods of adjusting Isotonicity.
c) Find the concentration of sodium chloride required to make 50ml of isotonic solution containing 1% Ephedrine Hydrochloride and 1% Chlorobutol
(Give: Freezing point of 1% w/v solution of Ephedrine Hydrocholoride is -0.165□.
Freezing point of 1% w/v solution of Chlorobutol is – 0.138□

4 a) i) Define Proof Spirit
ii) Find the strength of 90% and 70% alcohol in terms of Proof Spirit and Calculate the real strength of of 30□ O.P. & 40□U.P.
b) Calculate the volume of each of 90%, 60%, 30% and water are required to produce 500ml of 50% alcohol

5 a) Define Posology. Explain the factors influencing Posology
b) Calculate the dose for a child of 8 years, when the adult dose of a drug is 200mg.

6 a) Define Prescription. Explain different parts and handling of prescription.
b) Calculate the dose for a child of 10 years and 14 yrs when the adult dose of a drug is 100mg

7 Define Container and Closure. Write a note on different materials used in the preparation of Containers and Closures.

8 a) Give storage conditions for various Medicinal Products.
b) Write in detail about Blister, Strip and Bubble Packing.
c) Write a note on modern unit dose packaging

9 a) What are surfactants? Enlist different classes of surfactants and their pharmaceutical applications
b) Give a note on
i) Coloring Agents ii) Sweetening Agents iii) Vehicles

10 a) Explain various therapeutic and diagnostic uses of Radiopharmaceuticals.
b) Write a note on Preservatives and Antioxidants

*******

**Code No. 12273/ CBCS**

**FACULTY OF PHARMACY**
**B.Pharmacy I Semester (CBCS) (Backlog) Examination, July 2021**

**Subject: Basic Computer Applications-I**

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions. All Questions carry equal marks. (4x17 ½ = 70 Marks)**

1 (a) What is a Computer? Explain various Input and Output devices of Computer.
(b) Write short notes on types of Memory.

2 (a) Define Operating System (OS). Explain functions of OS.
(b) Write about different types of printers.

3 (a) Write the important features of MS WORD.
(b) Explain lists & tables in MS WORD.

4 (a) Write the features of MS Excel.
(b) Explain about Charts & Graphs in Excel.

5 Write short notes on Views, Transitions & Animations in MS Power Point.

6 (a) Write about importing, exporting & Linking in MS ACCESS.
(b) Write short notes on DB concepts.

7 (a) Write about pharmaceutical resources in WWW.
(b) Write types of indexing tools & search strategies.

8 Write short notes on
(i) Structure & Organization of WWW(ii) Information search in WWW.

9 What is HTML? Explain about Forms in HTML.

10 Write short notes on
(i) HTML Heading Tags (ii) Lists (iii) Tables in HTML.

****

**Code No. 12275/ CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I Semester (CBCS) (Backlog) Examination, August 2021

### Subject: Human Anatomy and Physiology - I

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions. All Questions carry equal marks. ($4x17^{1/2}$ = 70 Marks)**

1 (a) Explain in detail about the structure and functions of plasma membrane with a neat labeled diagram.
(b) Describe the structure and functions of nervous tissue.

2 (a) Define tissue and explain in detail about connective tissues.
(b) Write short note on cartilage.

3 (a) Define joint and discuss the various movements of synovial joints.
(b) Write short note on face bones.

4 (a) Explain the structural features of muscle tissues.
(b) Write in detail about the physiology of muscle contraction.

5 (a) Explain the composition and functions of plasma.
(b) What are the different types of lymph trunks and ducts involved in draining of lymph?

6 (a) Explain the structure and functions of thymus gland with a neat labeled diagram.
(b) Explain the process of haemopoiesis.

7 (a) Define and explain the events of cardiac cycle.
(b) Write short note on pulmonary circulation.

8 (a) What is meant by blood pressure and discuss the hormonal regulation of blood pressure?
(b) Write short note on ECG.

9 (a) Explain the structure of ear with a neat labeled diagram.
(b) Write about physiology of olfaction.

10 (a) Write in detail about the structure and functions of skin.
(b) Write short notes on physiology of taste buds.

****

**Code No. 12013/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I - Semester (CBCS) (Backlog) Examination, March 2021

## Subject: Pharmaceutical Inorganic Chemistry

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions.** **(4x17½=70 Marks)**

1 (a) Define 'limit test'. Explain its significance.

(b) Explain the principle and procedure involved in the limit test for chlorides and heavy metals.

2 Classify inorganic pharmaceuticals based on their therapeutic applications with examples.

3 (a) Write the preparation, tests for purity and uses of magnesium sulphate and aluminum hydroxide gel.
(b) Give the preparation and assay of ammonium chloride.

4 (a) What are electrolyte replinishers? Give the preparation, assay, uses and official preparations of sodium chloride.
(b) Explain the signigicance of dialysis fluids.

5 (a) What are haematinics? Write the preparation, properties and tests for purity of ferrous sulphate and ferrous gluconate.
(b) Write a note on desiccants.

6 (a) Write the preparation, properties, assay and uses of sodium metabisulphate.
(b) Explain adsorbents and absorbents with examples.
(c) Explain briefly about suspending agents.

7 (a) Write the preparation, properties and uses of following:
(i) Sodium thiosulphate.
(ii) Potassium iodide.
(iii) Zinc oxide.
(b) What are emetics? Write the preparation, tests for purity and uses of Copper sulphate.

8 (a) Write the preparation, properties and uses of following:
(i) Zinc sulphate.
(ii) Potassium permanganate.
(iii) Sodium nitrite.
(b) Write a note on silicone polymers.

9 Explain the preparation, properties and uses of following:
(a) Plaster of paris.
(b) Calcium Carbonate.
(c) Hydrogen peroxide.

10 (a) What are diagnostic agents? Explain the preparation, properties, assay and uses of barium sulphate.
(b) Explain the role of fluorides in the prevention of dental caries with examples.

******

# FACULTY OF PHARMACY

## B. Pharmacy I-Semester (CBCS) (Backlog) Examination, March 2021

## Subject: Mathematics

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions.** **(4 x 17 ½ = 70 Marks)**

1. (a) Prove that $\log \frac{75}{16} - 2\log \frac{5}{9} + \log \frac{32}{243} = \log 2$.

   (b) If $\text{Tan } A = \frac{1}{2}$ and $\text{Tan } (A + B) = \frac{7}{9}$ find Tan B.

2. (a) If $\log\left(x^2 y^3\right) = a$ and $\log \frac{x}{y} = b$, find log x and log y.

   (b) If a = sec θ + Tan θ show that $\sin \theta = \frac{a^2 - 1}{a^2 + 1}$.

3. (a) Ust the first principles to find the tan x derivaties.

   (b) Find the maximum and minima of the function $f(x) = (x-1)(x+2)^2$.

4. (a) If $u = \cos^{-1}\left(\frac{x + y}{\sqrt{x} + \sqrt{y}}\right)$ then show that $x\frac{\partial u}{\partial x} + y\frac{\partial u}{\partial y} = -\frac{1}{2}\cot u$.

   (b) If $u=x^3y^2-y \sin x$ then find $\frac{\partial u}{\partial x}, \frac{\partial u}{\partial y}$.

5. (a) Evaluate $\int \frac{1 - \text{Tan } x}{1 + \text{Tan } x} dx$.

   (b) Evaluate $\int e^x \cos^2 x \, dx$.

6. (a) Evaluate $\int \frac{dx}{x^2 + a^2} = \frac{1}{a}\text{Tan}^{-1}\left(\frac{x}{a}\right) + c$.

   (b) Find the area bounded by $y = x^2$ and $y = 2x$.

7. (a) Show that $\begin{vmatrix} 1 & 1 & 1 \\ \alpha & \beta & \gamma \\ \alpha^2 & \beta^2 & \gamma^2 \end{vmatrix} = (\alpha - \beta)(\beta - \gamma)(\gamma - \alpha)$.

   (b) Solve the system of equation

   x – y + z = 2
   2x + 3y – z = 5
   X + y – z = 0





…..2

8. (a) By Matrix Inversion method.

If a+b+c = 0 and $\begin{vmatrix} a-x & c & b \\ c & b-x & a \\ b & a & c-x \end{vmatrix} = 0$.

Then find the value of x.

(b) If $A = \begin{bmatrix} 1 & 4 & 7 \\ 2 & 5 & 8 \end{bmatrix}$ and $B = \begin{bmatrix} -3 & 4 & 0 \\ 4 & -2 & -1 \end{bmatrix}$ verify that

(i) $(AT)^T = A$ (ii) $(A+B)^T = A^T+B^T$.

9. (a) Find the degree and order

$$1 + \left(\frac{dy}{dx}\right)^2 = 7\left(\frac{d^2y}{dx^2}\right)^3$$

(b) Solve $(1-x^2)\frac{dy}{dx} + xy = 5x$.

10. Explain the Linear and non-Linear graphs with examples.

******

**Code No. 12018/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I - Semester (CBCS) (Backlog) Examination, March 2021

## Subject: Biology

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions.** **(4 x 17 ½ = 70 Marks)**

1. (a) Describe the structure of plant cell with neat labeled diagram.
   (b) Which are conducting tissue? Give their classification and function.

2. (a) Write a note on morphology, types and functions of roots.
   (b) Explain T.S of dicot stem with neat labeled diagram.

3. (a) Write a descriptive note on inflorescene.
   (b) Discuss in detail morphology of fruit.

4. (a) Explain the internal structure of dicot root.
   (b) Write about leaf modification and their significance.

5. (a) Describe vegetative and floral characteristics of solanaceae family.
   (b) Discuss taxonomy of apocynaceae family.

6. Describe vegetative, floral and taxonomical characteristics of Leguminoceae family.

7. (a) Describe the histology of rabbit kidney.
   (b) Write about histology of rabbit smooth muscles.

8. (a) Write a descriptive note on meiosis.
   (b) Write about histology of rabbit liver.

9. Describe the life history and disease caused by Plasmodium.

10. (a) Describe the role of house fly as vector for spreading the diseases.
    (b) Describe the life history and disease caused by trypnosoma.

******

**Code No. 12016/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I - Semester (CBCS) (Backlog) Examination, March 2021

## Subject: Human Anatomy and Physiology - I

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions.** **(4 x 17 ½ = 70 Marks)**

1. (a) Define tissue and explain in detail about the structure and functions of epithelial tissues with neat labeled diagrams.
   (b) Define the following terms:
   (i) Anterior (ii) Posterior (iii) Lateral (iv) Superior.
2. (a) Explain the structure and functions of plasma membrane with a neat labeled diagram.
   (b) Define and explain different types of active transport mechanism with examples.
3. (a) Explain the structure and functions of the following bones with neat labeled diagrams.
   (i) Thoracic vertebrae (ii) Humerus.
   (b) Discuss the various types of movements of joints.
4. (a) Write about the process of muscle contraction in detail.
   (b) Write short notes on neuromuscular junction.
5. Define haemostasis and explain in detail about haemostasis.
6. (a) Explain the structure and functions of lymph node with a neat labeled diagram.
   (b) Write about different types of white blood cells.
7. (a) Define and explain the events of cardiac cycle.
   (b) Explain the conducting system of the heart.
8. (a) What is meant by blood pressure and write about neuronal regulation of blood pressure.
   (b) Define ECG and correlate ECG with the events of cardiac cycle.
9. (a) Explain the structure of ear with a neat labeled diagram.
   (b) Write short notes on physiology of taste buds.
10. (a) Explain the physiology of hearing.
    (b) Write in detail about the structure and functions of skin.

******

**Code No. 12015/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I - Semester (CBCS) (Backlog) Examination, March 2021

**Subject: General Pharmacy**

**Time : 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions.** **(4 x 17 ½ =70 Marks)**

1. (a) Describe formulation monograph with an example.
   (b) Explain in detail about the affiliating bodies of pharmaceutical education in India.
2. Give brief description to USP and explain the pharmacopoeial monograph contents with an example of API.
3. (a) Explain in detail about the selection and care of weights and balances.
   (b) Define Normality, Molarity, Molality.
   (c) Convert $90^0$OP and $30^0$UP to percentage V/V alcohol.
4. (a) Define isotonicity and explain methods of adjusting tonicity.
   (b) How do you prepare 1000 ml of 4% w/v sodium chloride solution?
   (c) Inter convert $30^0$UP and $45^0$OP into % V/V alcohol.
5. (a) Explain parts of a prescription. Give note on modern methods of prescribing medicines.
   (b) Write a note on types of dose calculations for infants and children.
6. (a) Calculate the dose required for the following if the adult dose of the drug is 600mg
   (i) 11 months old infant (ii) 5 years child (iii) boy of 14 years.
   (b) Discuss in detail about how to respond to a prescription and pricing of prescription.
7. (a) Write about various types of modern unit does packaging of formulations.
   (b) Explain different types of containers and closures for semi solid formulations.
8. (a) Explain in detail about the storage conditions for various medicinal products.
   (b) Write about several cautionary and advisory labels for different formulations.
   (c) Explain child resistant containers.
9. (a) What are Organoleptic additives. Give in detail about Colouring and Sweetening agents in detail.
   (b) Describe about official medical gases. Write about uses and handling of those gases.
10. (a) Enlist various therapeutic and diagnostic uses of radiopharmaceuticals.
    (b) Explain in detail about hydrocolloids.

******

**Code No. 12014/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I-Semester (CBCS) (Backlog) Examination, March 2021**

**Subject: Basic Computer Applications - I**

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions.** **(4x17½= 70 Marks)**

1. (a) Define computer. Explain the characteristics of computers.
   (b) Write about principles of Flow charting.

2. (a) What is computer VIRUS? Explain about computer viruses.
   (b) Explain the importance of Operating Systems.

3. (a) Write short notes on
   (i) Tables in MS WORD (ii) Spelling & Grammar
   (iii) Lists in MS WORD (iv) Working with text.
   (b) Write short notes on
   (i) Charts & graphs in MS Excel.
   (ii) Features of MS Excel.
   (iii) Spreadsheet/Worksheet.

4. (a) Explain about types of indexing tools and search strategies.
   (b) Write note on Search engines.

5. (a) Explain different types of views in MS Power Point.
   (b) Explain Slide Design & Custom animation in MS Power Point.

6. (a) What is DB? How to create tables in MS ACCESS?
   (b) Write a brief notes on (i) Sorting & Filtering (ii) Table relationships.

7. (a) Write the different types of indexing tools and search strategies.
   (b) Write about search engines and browsers.

8. (a) Write about E-Mail, Information search in WWW.
   (b) Write short notes on structure and organization of WWW.

9. (a) Write the structure of HTML and elements(tags) of HTML.
   (b) Write short notes on hyperlinks in HTML.

10. (a) Write short notes on Lists and Tables in HTML.
    (b) Write about Text formatting and Hyper links.

******

**Code No.6230/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I-Semester (CBCS) (Backlog) Examination, October 2020**

**Subject: Human Anatomy and Physiology - I**

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions.** **(4x17½=70 Marks)**

1. (a) Explain in detail about the structure and functions of plasma membrane with a neat labeled diagram.
   (b) Describe the structure and functions of muscle tissues.
2. Define tissue and explain in detail about connective tissues.
3. (a) Discuss the various types of movements of joints.
   (b) Explain the structure and functions of femur with diagram.
4. What is a Joint? Explain different types of synovial joints with examples.
5. (a) Explain the composition and functions of blood.
   (b) Write short note on blood grouping.
6. (a) Explain the structure and functions of spleen with a neat labeled diagram.
   (b) What are the different types of lymph trunks and ducts involved in draining of lymph?
7. (a) Define Blood pressure and its regulation.
   (b) Write a note on Cardiac cycle.
8. (a) Explain Anatomy of heart and blood vessels.
   (b) Write short note on portal circulation.
9. (a) Explain the structure of eye with a neat labeled diagram.
   (b) Write about different types of taste buds.
10. Write in detail about the structure and functions of skin.

******

**Code No.6228/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I - Semester (CBCS) (Backlog) Examination, October 2020**

**Subject: Basic Computer Applications - I**

**Time: 2 Hours** **Max. Marks: 70**

**Note: Answer any four questions.** **(4x17½=70 Marks)**

1. (a) What is a computer. Explain various input and output devices of a computer?
   (b) Write short notes on types of memory.

2. (a) Define Operating Systems. Explain functions of Operating Systems.
   (b) Write about different types of printers.

3. (a) Write the important features of MS WORD.
   (b) Explain lists and tables in MS WORD.

4. (a) Write the features of MS Excel.
   (b) Explain about charts and graphs in Excel.

5. Write short notes on views, transitions and animations in MS Power Point.

6. (a) Write about importing, exporting and linking in MS ACCESS.
   (b) Write short notes on Data Base concepts.

7. (a) Write about pharmaceutical resources in WWW.
   (b) Write types of indexing tools and search strategies.

8. Write short notes on
   (i) E-Mail (ii) Structure and organization of WWW (iii) Information search in WWW.

9. What is HTML? Explain about Frames and Forms, Text formatting, Hyperlinks in HTML.

10. Write short notes on
    (i) HTML heading tags.
    (ii) Images.
    (iii) Lists.
    (iv) Tables.

******

**Code No. 6002/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I – Semester (CBCS) (Backlog) Examination, December 2019**

**Subject: Basic Computer Applications-I**

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1. a) Define Computer? Explain Characteristics of Computer?
   b) Write about various Input and Output devices of a computer?

   **OR**

   c) Define OS (Operating System)? Explain the importance of OS?
   d) Explain Principles of Flow charting?
2. a) Write short notes on
   i) lists ii) tables
   iii) spelling & grammar iv) working with text in MS WORD

   **OR**

   b) Explain the concept of Charts & Graphs in MS Excel?
3. a) Explain different Views in MS Power point?
   b) Write about Slide Transition & Custom Animation?

   **OR**

   c) Write short notes on
   (i) Creating Tables (ii) Table Relationships
   (iii) Sorting & Filtering (iv) Importing, Exporting & Linking
4. a) Explain about Information search in WWW & Pharmaceutical Resources in WWW?

   **OR**

   b) Write short notes on
   (i) Structure & Organization of WWW (ii) Search Engines
   (iii) Email (iv) Browsers
5. a) Explain the structure of HTML?
   b) Write short notes on i) Tables ii) Heading Tags

   **OR**

   c) Explain about different types of list tags in HTML?
   d) Explain about Forms & Frames in HTML?

**********

**Code No. 6001/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, December 2019

## Subject: Pharmaceutical Inorganic Chemistry

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1. a) List out various sources of impurities in Pharmaceutical substances. Explain any two of them with examples. 3+6
   b) Explain the principle and procedure involved in the limit text for sulphates. 5

   **OR**

   c) Describe the principle and procedure involved in the limit test for arsenic with a neat labeled diagram. 8
   d) Explain the principle and procedure involved in the limit test for iron. 6

2. a) Explain the role of electrolytes in body fluids. 8
   b) Define 'antacids' and 'laxatives'. Give the preparation, properties and tests for purity of (i) Calcium gluconate (ii) Magnesium sulphate 6

   **OR**

   c) Give the composition, mode of supply and uses of haemo dialysis fluid. 3
   d) Write the preparation, properties and uses of following:
      i) Ammonium Chloride. 3
      ii) Sodium Chloride 4
      ii) Aluminum hydroxide gel 4

3. a) Define 'Haematinics'. Give the preparation, tests for purity and uses of ferric ammonium citrate and ferrous gluconate. 1+8
   b) Write a note on silica gel. 5

   **OR**

   d) Write the preparation, properties, assay and uses of
      (i) Ferrous sulphate (ii) Magnesium stearate 2x5=10

4. a) Define 'astringents'. Explain the preparation, Tests for purity and properties of zinc sulphate. 1+4
   b) Write the preparation, properties and uses of following: 3x3=9
      (i) Silver nitrate (ii) Copper sulphate (iii) Sodium nitrate

   **OR**

   c) What are anti-infective agents? Write the preparation, assay and uses of following: 1+8
      (i) Boric acid (ii) Potassium Permanganate
   d) What are expectorants? Give the preparation, properties and assay of potassium iodide. 5

5. a) What are surgical aids? Write a note on plaster of paris? 5
   b) What are cements and fillers? Write the preparation and properties of zinc oxide? 5
   c) Write a note on anti thyroid agents. 4

   **OR**

   d) Explain the preparation, properties and uses of following: 3x3 = 9
      i) Barium Sulphate ii) Calcium Carbonate
      iii) Hydrogen Peroxide
   e) Write the significance of fluorides in dental products. 5

**Code No. 6005/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, January 2020

### Subject: Mathematics

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1.a) If $\log\left(x^2 y^3\right) = a$ and $\log \frac{x}{y} = b$ find $\log x$ and $\log y$

b) Find the value of $\sin 22\frac{1}{2}^0$ and $\cos 22\frac{1}{2}^0$

**OR**

c) Find the value of $x \log \frac{x}{5} + \log \frac{5}{x} = \frac{5}{2}$

d) If $\cot\theta = \frac{5}{2}$ and $\theta$ is acute show that $\frac{5\cos\theta + 2\sin\theta}{5\cos\theta - 2\sin\theta} = \frac{29}{21}$

2. a) Use the first principles to find the $\sin x$ derivative.

b) Find the Maximum and Minima of the function $f(x) = 2x^3 - 15x^2 + 36x + 10$

**OR**

c) If $u = \sin^{-1}\frac{x}{y} + Tan^{-1}\frac{y}{x}$ show that $x\frac{\partial u}{\partial x} + y\frac{\partial u}{\partial y} = 0$

d) If $z = x^2 + 3xy + y^2 - 2$ find $\frac{\partial z}{\partial x}$ and $\frac{\partial z}{\partial y}$

3. a) Evaluate $\int \frac{x^2 - 1}{x^2 + 1} dx$

b) Evaluate $\int \cos^3 x \sin^4 x\, dx$

**OR**

c) Evaluate $\int Tan^{-1} x\, dx$

d) Find the area enclosed between the curves $y = 8 - x^2$ and $y = x^2$

4. a) Show that $\begin{vmatrix} 1 & 1 & 1 \\ a & b & c \\ a^2 & b^2 & c^2 \end{vmatrix} = (a-b)(b-c)(c-a)$

b) Solve the system of equations

$x_1 + x_2 - x_3 + x_4 = 2, x_1 + x_2 - x_3 + x_4 = -4 x_1 + x_2 + x_3 + x_4 = 0$

**OR**

c) Find the value of $x$ if $\begin{vmatrix} 1 & -2 & x+3 \\ 1 & x-2 & 3 \\ x+1 & -2 & 3 \end{vmatrix} = 0$

d) If $A = \begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$ show that $A^2 - 5A + 7I = 0$

5. a) Write about Linear and non-linear graphs and explain.

**OR**

b) Explain the equation of line $y = mx + c$ and its importance in programming.

**********

**Code No. 6006/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I – Semester (CBCS) (Backlog) Examination, January 2020**

**Subject: Biology**

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1 a) (i) Give the brief classification of plant kingdom.
(ii) Discuss in detail mitosis

**OR**

b) (i) Discuss the structure and function of xylem and phloem cells.
(ii) Describe in detail about underground stem modification.

2. a) Describe in detail morphology and histology of fruit.

**OR**

b) (i) Discuss the morphology of leaf.
(ii) Describe in detail about root modification.

3. a) (i) Write a floral characteristics of solanaceae family.
(ii) Give economical importance of Umbelliferae family.

**OR**

b) (i) Explain the floral characteristics of scrophulariaceae family.
(ii) Describe taxonomy of leguminoceace family.

4. a) (i) Differentiate between plant and animal cell.
(ii) Write a note on histology of rabbit liver.

**OR**

b) (i) What are the hormones secreted by pituitary glands? Give their clinical significance?
(ii) Describe structure and function of smooth muscle.

5. a) (i) Give the external morphology of tapeworm.
(ii) Discuss the life history of housefly.

**OR**

b) Describe the life cycle of Plasmodium vivax.

**********

**Code No. 6004/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy I – Semester (CBCS) (Backlog) Examination, January 2020**

**Subject: Human Anatomy and Physiology – I**

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1 a) Explain in detail about the structure and functions of plasma membrane with a neat labeled diagram. 7

b) Describe the structure and functions of nervous tissue. 7

**OR**

c) Describe tissue and explain in detail about epithelial tissues. 10

d) Explain different types of body cavities. 4

2. a) What is a Joint? Explain different types of synovial joints with examples. 10

b) Explain the structure and functions of scapula with diagram. 4

**OR**

c) Discuss various types of movements of joints. 9

d) Write short notes on neuromuscular junction. 5

3. a) Define homeostasis and explain in detail about homeostasis. 9

b) Write about structure and functions of white blood cells. 5

**OR**

c) Explain the structure and functions of thymus gland with a neat labeled diagram. 8

d) What are different types of lymph trunks and ducts involved in draining of lymph? 6

4. a) Define and explain the events of cardiac cycle. 10

b) Explain about the hepatic circulation of blood. 4

**OR**

c) What is meant by blood pressure and write about the factors affecting blood pressure? 8

d) Define and explain in details about ECG. 6

5. a) Explain the structure of ear with a neat labeled diagram. 9

b) Write short notes on anatomy of taste buds. 5

**OR**

c) Write in detail about the structure and functions of skin. 8

d) Explain the physiology of olfaction. 6

**********

**Code No. 6003/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, January 2020

## Subject: General Pharmacy

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1. a) Write a note on affiliating bodies for pharmaceutical education in India. 7
   b) Explain Indian Pharmacopoeia and Merck Index 7

**OR**

   c) Describe each term of monograph by providing an example of drug. 10
   d) Discuss about the development of Pharmaceutical education in India. 4
2. a) Explain in detail about the selection and care of weights and balances. 5
   b) Convert $80^{o}$ OP and $40^{o}$UP to percentage V/V alcohol. 4
   c) What are isotonic solutions and explain the methods of adjusting tonicity? 5

**OR**

   d) Define Normality, Morality, Molality and isotonic solution. 5
   e) Write a short note on minimum weighable amounts and calibration of weights. 5
   f) How much quantity of 90% alcohol will be required to prepare 700 ml of 20% alcohol. 4

3. a) Define prescription. Explain modern methods of prescribing medicines and discuss about the care required in handling prescriptions. 7
   b) Calculate the dose for
      i) 8 Months old infant ii) 6 years child iii) Boy of 13 years
      Adult dose of the drug in 500 mg. 7

**OR**

   c) Write a notes on
      (i) Responding to prescription (ii) Pricing of prescription 7
   d) Explain parts of prescription. Explain various types of dose calculations for infants and children. 7
4. a) Classify containers with respect to method of closures. 4
   b) Write about various cautionary and advisory labels for different formulations. 4
   c) Write in detail about blister, strip and bubble packing. 7

**OR**

   d) Give storage conditions for various medicinal products. 6

   e) Explain in detail about the container closure system for semisolid preparations meant for application to the skin or mucosa. 8
5. a) Discuss in detail about the preparation and various therapeutic and diagnostic uses of radiopharmaceuticals. 9
   b) Write about i) Sweetening agents ii) Colouring agents

**OR**

   c) Discuss in brief about the uses, containers, handling and storage of official medical gases.
   d) Explain in detail about Hydrocolloids and Surfactants.

**********

**Code No. 13196/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I-Sem (CBCS) (Backlog) Examination, August 2019

## Subject: Basic Computer Application - I

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer ALL questions. All questions carry equal marks.**

1. (a) Draw block diagram of a computer and explain its components.
   (b) Write about types of Printers.

   **OR**

   (c) Define OD (operating system). Explain the functions of OS.
   (d) Write about MICR, OCR & CDROM.

2. (a) Write the features of MS WORD.
   (b) Explain working with files and spelling and grammar in MS WORD.

   **OR**

   (c) Explain the concept of charts and Graphs in Ms Excel.
   (d) Write about different types of formulas and functions in Ms Excel.

3. (a) Explain Transitions and Animations in Ms Powerpoint.
   (b)Write short notes on :
   i) Views ii) Slide control iii) Master slide

   **OR**

   (c) Write short notes on :
   i) Data types ii) Queries
   iii) Sorting & filtering iv) Forms

4. (a) Explain about Pharmaceutical Resources in WWW, Types of Indexing tools & Search strategies.

   **OR**

   (b) Write short note on
   i) Information search in WWW ii) Search Engines
   iii) Email iv) Browsers

5. (a) Explain the basic structure of HTML.
   (b) Write short notes on i) Forms ii) Images

   OR

   (c) Explain about different types of list tags in HTML.
   (d) Write about text formatting & tables in HTML.

******

Code No. 13195/CBCS

# FACULTY OF PHARMACY

## B. Pharmacy I-Semester (CBCS) (Backlog) Examination, August 2019

### Subject: Pharmaceutical Inorganic Chemistry

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer ALL questions. All questions carry equal marks.**

1. (a) What are limit tests? Explain the principle & procedure involved in the limit test for arsenic with a neat labeled diagram. 9
   (b) Explain the principle and procedure involved in the limit test for chlorides 5

   **OR**

   (c) Classify pharmaceutical inorganic compounds based on their therapeutic applications with examples. 10
   (d) Explain the following with respect to limit tests. 2+2
   i. Role of citric acid and ammonia in limit test for iron.
   ii. Role of barium sulphate reagent in limit test for sulphates.

2. (a) What are antacids? Give the preparation and assay of magnesium hydroxide mixture and aluminium hydroxide gel. 1+8
   (b) Write the following. 2+3
   i. Preparation and uses of magnesium sulphate
   ii. Assay of ammonium chloride

   **OR**

   (c) Explain the preparation, properties, official preparations and uses of calciumgluconate. 6
   (d) Describe the significance of dialysis fluids. 3
   (e) What are electrolyte replenishers? Write the preparation and assay of sodium chloride. 5

3. (a) What are antioxidants? Give the preparation, properties, tests for purity and uses of sodium metabisulphite. 1+5
   (b) List out the official iron compounds used as haematinics. Write the preparation, properties and assay of ferrous sulphate. 1+4
   (c) Write a note on activated charcoal. 3

   **OR**

   (d) Write the preparation, properties and uses of following: 3+3+3
   (i) Magnesium stearate (ii) Ferric ammonium citrate (iii) Silica gel
   (e) Give a note on suspending agents. 5

4. (a) Give the preparation, properties and uses of the following: 3+3+3
   i. Zinc Sulphate ii. Silver nitrate iii. Copper sulphate
   (b) What is Cyanide poisoning? Give the preparation and mechanism of any one inorganic compound used in the treatment of cyanide poisoning. 1+4

   OR

   (c) Define the terms 'emetics' and 'antidotes' with examples. 2
   (d) What are expectorants? Write the preparation, properties, assay and uses of potassium iodide. 1+5
   (e) Give the preparation, tests for purity and uses of boric acid.

.....2

5. (a) Write the preparation, properties and uses of 5+4+5
   i. Hydrogen peroxide ii. Plaster of paris iii. Zinc oxide

   OR

   (b) Define the terms with examples 1+1+1+1
   i. Antiothyorid agents iii. Surgical acids
   ii. Dentifrices iV. Cements & fillers

   (c) What are diagnostic agents? Discuss the preparation, properties, tests for purity and assay of barium sulphate. 2+8

******

**Code No. 13197/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I-Sem (CBCS) (Backlog) Examination, August 2019

## Subject: General Pharmacy

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer ALL questions. All questions carry equal marks.**

1. (a) Explain the detailed pharmacopoeial monograph contents with an example of API. 9
   (b) Explain in detail about various career opportunities in pharmacy. 5

   **OR**

   (c) Give brief explanation to USP and BP. 7

   (d) Discuss about the affiliating bodies of Pharmaceutical education. 7

2. (a) Define Normality, Molarity and Molality. 4
   (b) Write short note on minimum weighable amounts and calibration of weights. 6
   (c) How much quantity of 95% alcohol will be required to prepare 400 ml of 45% alcohol. 4

   **OR**

   (d) Explain in detail about the selection and care of weights and balances. 5
   (e) Convert $80^0$ OP and $40^0$ UP to percentage V/V alcohol. 4
   (f) What are isotonic solutions and explain different methods for adjusting tonicity. 5

3. (a) Define prescription. Explain in detail about the Parts of prescription. 7
   (b) Calculate the dose if the adult dose of the drug is 500mg for: 7
   i) 8 months old infant ii) 6 years child iii) Boy of 13 years

   **OR**

   (c) Explain parts of prescription. Explain various types of dose calculations for infants and children. 7
   (d) Write a note on i) Responding to prescription ii) Pricing of prescription. 7

4. (a) Classify containers with respect to method of closures. 4
   (b) Write about various cautionary and advisory labels for different formulations. 6
   (c) What are the ideal properties of the container closure system? 4

   **OR**

   (d) Write a note on child resistant containers. 6
   (e) Explain in detail about the container closure system for semisolid preparations meant for application to the skin or mucosa. 8

5. (a) Write a note on Hydrocolloids. 7
   (b) Discuss in brief about the uses, safety measures and precautions while handling medical gases. 7

   OR

   (c) Write a note on i) Antioxidants ii) Surfactants 4+4
   (d) Discuss in detail about the preparation and uses of any two radiopharmaceuticals. 6

*****

Code No. 13004 / CBCS

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, January 2019

### Subject: Human Anatomy and Physiology – I

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

| | | | |
|---|---|---|---|
| 1 | a) | Explain in detail about the structure and functions of plasma membrane with a neat labeled diagram. | 9 |
| | b) | Define and explain different types of active transport mechanism with examples. | 5 |
| | | **OR** | |
| 2 | a) | Define tissue and explain in detail about muscular tissues. | 10 |
| | b) | Explain different types of body cavities. | 4 |
| 3 | a) | What is a Joint? Explain different types of synovial joints with examples. | 8 |
| | b) | How many bones are there in face and explain them briefly. | 6 |
| | | **OR** | |
| 4 | a) | Write about the process of muscle contraction in detail. | 9 |
| | b) | Write short notes on Neuromuscular junction. | 5 |
| 5 | a) | Define haemopoiesis and explain in detail about haemopoiesis. | 9 |
| | b) | Classify the types of blood cells and write about structure and functions of white blood cells. | 5 |
| | | **OR** | |
| 6 | a) | Explain the structure and functions of lymph nodes with a neat labeled diagram. | 8 |
| | b) | What are the different types of lymph trunks and ducts involved in draining of lymph. | 6 |
| 7 | a) | Define and explain the events of cardiac cycle. | 10 |
| | b) | Explain about the pulmonary circulation of blood. | 4 |
| | | **OR** | |
| 8 | a) | What is meant by blood pressure and write about neuronal regulation of blood pressure. | 9 |
| | b) | Define and explain in detail about ECG. | 5 |
| 9 | a) | Explain the structure of eye with a neat labeled diagram. | 9 |
| | b) | Write short notes on physiology of taste buds. | 5 |
| | | **OR** | |
| 10 | a) | Write in detail about the structure and functions of skin. | 8 |
| | b) | Explain the physiology of olfaction. | 6 |

****

**Code No. 13003 / CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, January 2019

### Subject: General Pharmacy

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1 a) Write in detail about Pharmaceutical Education in India. 7

Write a note on the following: 7

b) Indian Pharmacopia (IP)

c) United States Pharmacopia (USP)

**OR**

2 a) Write in detail about Evolution of Pharmacy. 7

b) Write a note on Pharmacy as a career. 7

3 Write a note on the following: 14

a) Alligation method

b) Proof spirit

c) Write the calculation for preparation of 500 ml 50% alcohol from 90% alcohol and water by allegation method.

**OR**

4 Write a note on the following: 14

a) Alcohol dilution

b) Isotonic solution

c) Calculate the real strength of $30^{o}$ O.P. and $40^{o}$ U.P.

5 a) Define Posology? Write in detail about factors influencing dose. 10

b) Write a note on calculations of dose for infants and children. 4

**OR**

6 a) Define prescription? Write various parts, sources of errors and its handling. 8

Write a note on the following: 6

a) Modern methods of prescription

b) Responding to prescription

7 a) Classify different types of containers and closures and describe them. 8

b) Write a note on the cautionary and Advisory Labels. 6

**OR**

8 a) Write a note on different materials used in the preparation of containers and closures. 10

b) Write a note on modern unit dose packaging. 4

9 Write a note on the following: 14

a) Flavouring agents

b) Colouring agents

c) Write a note on medical gases and its uses.

**OR**

10 Write a note on the following: 14

a) Vehicles

b) Surfactants

c) Srite a note on radio pharmaceuticals and its therapeutic and diagnostic uses.

****

Code No. 13001 / CBCS

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, January 2019

## Subject: Pharmaceutical Inorganic Chemistry

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1 a) Define limit test. Explain the principle and procedure involved in the limit test for arsenic with a neat labeled diagram. 8
b) Discuss about sources of impurities in pharmaceuticals. 6

**OR**

2 a) Classify inorganic pharmaceuticals based on their therapeutic applications with examples. 8
b) Explain the principle and procedure involved in the limit test for iron and sulphates. 3+3

3 a) What are antacids? Give the method of preparation and assay of aluminium hydroxide gel and magnesium hydrioxide mixture. 1+4+4
b) Write the significance of acid-base regulators. 5

**OR**

4 a) What are electrolyte replenishers? Write the method of preparation, assay and uses of sodium chloride. 8
b) Write a note on haemodialysis fluids. 6

5 a) What are haematinics? Mention the preparation, properties and uses of ferrous sulphate and ferrous gluconate. 7
b) Classify pharmaceutical aids with examples. Write a note on activated charcoal. 3+4

**OR**

6 a) What are suspending agents? Write the preparation and uses of bentonite. 5
b) Give the method of preparation, properties and uses of 9
(i) Sodium bisulphate
(ii) Magnesium stearate

7 a) Define the term expectorant and emetic. Give the method of preparation and uses of potassium iodide and copper sulphate. 8
b) What are anti infectives? Write a note on iodine solutions. 6

**OR**

8 a) Give the method of preparation, properties and uses of the following: 5+5
(i) Zinc oxide
(ii) Calcium hydroxide
b) Write a note on silicone polymers. 4

9 a) What are anticaries agents? Explain the role of fluorides in preventing dental caries. 1+5
b) Define oral antiseptic and astringent. Mention the preparation, test for purity and assay of hydrogen peroxide. 8

**OR**

10 a) What are diagnostic agents. Give the method of preparation and assay of barium sulphate. 8
b) Mention the properties and uses of the following: 6
(i) Calcium carbonate (ii) Potassium perchlorate.

****

Code No. 13005 / CBCS

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, February 2019

**Subject: Mathematics**

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1 a) Find the value of $\log_{2\sqrt{2}}^{64}$.

b) If tan 20° = K, prove that $\frac{\tan 250^\circ + \tan 340^\circ}{\tan 200^\circ - \tan 110^\circ} = \frac{1-K^2}{1+K^2}$.

**OR**

2 a) Prove that $\frac{1}{\log_a^{abc}} + \frac{1}{\log_b^{abc}} + \frac{1}{\log_c^{abc}} = 1$.

b) If $\tan^{-} = a/b$, find $\frac{a\sin\theta + b\cos\theta}{a\sin\theta - b\cos\theta}$.

3 a) Find $\lim_{x\to 0} \frac{\sin x - \tan x}{x}$.

b) If $y = ae^x + be^{-x}$, find $\frac{dy}{dx}$ and $\frac{d^2y}{dx^2}$.

**OR**

4 a) Find the derivative of cos x using first principle.

b) Find the maximum value of $2x^3 - 3x^2 - 36x + 10$.

5 a) Evaluate $\int e^x \sqrt{1+e^x}\, dx$.

b) Evaluate $\int \frac{1+\cos x}{x+\sin x} dx$.

**OR**

6 a) Evaluate $\int \cos^3 x \sin x\, dx$.

b) Evaluate $\int \frac{2x+1}{x^2+x+1} dx$.

7 a) If $A = \begin{bmatrix} 1 & 2 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 1 \end{bmatrix}$, then show that

$A^2 - 4A - 5I = 0$

b) If $A = \begin{bmatrix} 0 & 1 & 2 \\ 1 & 2 & 3 \\ 3 & 1 & 2 \end{bmatrix}$, find $A^{-1}$.

..2

**OR**

8 a) If $A=\begin{bmatrix} 3 & -3 & 4 \\ 2 & -3 & 4 \\ 0 & -1 & 1 \end{bmatrix}$ then show that $A^{-1} = A^3$.

b) Solve the equations $3x + 4y + 5z = 18$, $2x – y + 8z = 13$ and $5x – 2y + 7z = 20$, by matrix inversion method.

9 a) Find the distance between the points (-1, 1) and (2, 3).

b) Find the equation of the straight line passing through the point (-2, 1) and parallel to $4x – 7y + 3 = 0$.

**OR**

10 a) Explain about linear and non-linear graphs and their importance in biological data representation and comparison.

b) Find the centre and radius of the circle $x^2 + y^2 + 4x + 6y + 1 = 0$.

****

Code No. 13006 / CBCS

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, February 2019

## Subject: Biology

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1 a) Draw neat labelled diagram of ultra structure of plant cell.

b) Define tissue. Describe the structure and function of Xylem tissues.

**OR**

2 a) Describe the histology of dicot stem with the help of a neat labelled diagram.

b) Write a note on waste products in a plant cell.

3 a) Discuss various storage roots.

b) Discuss various types of venation in leaf.

**OR**

4 a) Describe the types of simple dry dehiscent fruit.

b) Discuss aerial stem modifications.

5 a) Write a note on medicinal and economic importance of Leguminosae.

b) Discuss the floral characters of Umbelliferae.

**OR**

6 a) Draw the floral diagrams and write the floral formula of Apocynaceae and Scrophulariaceae.

b) Classify Datura inoxia in its family with the help of its floral characters.

7 a) Draw neat and labelled diagram of histology of Rabbit kidney.

b) Discuss the mitotic cell division in animals.

**OR**

8 a) List out the difference between plant and animal cell.

b) Draw neat and labelled diagram of histology of Pancreas of Rabbit.

9 a) Discuss the life-cycle and pathogenicity of tapeworm Taenia solium.

b) Discuss the life-cycle of Housefly.

**OR**

10 a) Describe the life-history of Plasmodium in man.

b) Describe the life-history of Entamoeba.

****

Code No. 13005 / CBCS

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, February 2019

**Subject: Mathematics**

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1 a) Find the value of $\log_{2\sqrt{2}}^{64}$.

b) If tan 20° = K, prove that $\frac{\tan 250^\circ + \tan 340^\circ}{\tan 200^\circ - \tan 110^\circ} = \frac{1-K^2}{1+K^2}$.

**OR**

2 a) Prove that $\frac{1}{\log_a^{abc}} + \frac{1}{\log_b^{abc}} + \frac{1}{\log_c^{abc}} = 1$.

b) If $\tan^{-} = a/b$, find $\frac{a\sin\theta + b\cos\theta}{a\sin\theta - b\cos\theta}$.

3 a) Find $\lim_{x\to 0} \frac{\sin x - \tan x}{x}$.

b) If $y = ae^x + be^{-x}$, find $\frac{dy}{dx}$ and $\frac{d^2y}{dx^2}$.

**OR**

4 a) Find the derivative of cos x using first principle.

b) Find the maximum value of $2x^3 - 3x^2 - 36x + 10$.

5 a) Evaluate $\int e^x \sqrt{1+e^x}\, dx$.

b) Evaluate $\int \frac{1+\cos x}{x+\sin x} dx$.

**OR**

6 a) Evaluate $\int \cos^3 x \sin x\, dx$.

b) Evaluate $\int \frac{2x+1}{x^2+x+1} dx$.

7 a) If $A = \begin{bmatrix} 1 & 2 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 1 \end{bmatrix}$, then show that

$A^2 - 4A - 5I = 0$

b) If $A = \begin{bmatrix} 0 & 1 & 2 \\ 1 & 2 & 3 \\ 3 & 1 & 2 \end{bmatrix}$, find $A^{-1}$.

..2

**OR**

8 a) If $A=\begin{bmatrix} 3 & -3 & 4 \\ 2 & -3 & 4 \\ 0 & -1 & 1 \end{bmatrix}$ then show that $A^{-1} = A^3$.

b) Solve the equations $3x + 4y + 5z = 18$, $2x – y + 8z = 13$ and $5x – 2y + 7z = 20$, by matrix inversion method.

9 a) Find the distance between the points (-1, 1) and (2, 3).

b) Find the equation of the straight line passing through the point (-2, 1) and parallel to $4x – 7y + 3 = 0$.

**OR**

10 a) Explain about linear and non-linear graphs and their importance in biological data representation and comparison.

b) Find the centre and radius of the circle $x^2 + y^2 + 4x + 6y + 1 = 0$.

****

Code No. 13006 / CBCS

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, February 2019

## Subject: Biology

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1 a) Draw neat labelled diagram of ultra structure of plant cell.

b) Define tissue. Describe the structure and function of Xylem tissues.

**OR**

2 a) Describe the histology of dicot stem with the help of a neat labelled diagram.

b) Write a note on waste products in a plant cell.

3 a) Discuss various storage roots.

b) Discuss various types of venation in leaf.

**OR**

4 a) Describe the types of simple dry dehiscent fruit.

b) Discuss aerial stem modifications.

5 a) Write a note on medicinal and economic importance of Leguminosae.

b) Discuss the floral characters of Umbelliferae.

**OR**

6 a) Draw the floral diagrams and write the floral formula of Apocynaceae and Scrophulariaceae.

b) Classify Datura inoxia in its family with the help of its floral characters.

7 a) Draw neat and labelled diagram of histology of Rabbit kidney.

b) Discuss the mitotic cell division in animals.

**OR**

8 a) List out the difference between plant and animal cell.

b) Draw neat and labelled diagram of histology of Pancreas of Rabbit.

9 a) Discuss the life-cycle and pathogenicity of tapeworm Taenia solium.

b) Discuss the life-cycle of Housefly.

**OR**

10 a) Describe the life-history of Plasmodium in man.

b) Describe the life-history of Entamoeba.

****

**Code No. 13002 / CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I – Semester (CBCS) (Backlog) Examination, January 2019

### Subject: Basic Computer Applications – I

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1 a) Describe the basic structure of a computer. Explain the functions and components of computer. 7
b) Write the principles of flow charting. List commonly used symbols in flow charts. 7

**OR**

2 a) What is operating system? Explain importance and features of OS. 7
b) What is VIRUS? How it will affect the computer and how can we protect computer from viruses? 7

3 a) Discuss about tables in MS-WORD. 7
b) Discuss about creating, editing and formatting document in MS-WORD. 7

**OR**

4 a) Write about important features of MS-EXCEL. 7
b) Explain chart and graphs in Excel. 7

5 a) Write about transitions and animations in MS Power Point. 7
b) Explain about templates and wizards. 7

**OR**

6 Explain about 14
a) Table Relationships
b) Queries
c) Data types in MS Access
d) Databases

7 Explain the following: 14
a) Structure and organization of WWW
b) E-Mail
c) Search Engine
d) Pharmaceutical resources in WWW

**OR**

8 a) Explain about different types of indexing tools and search strategies. 14
b) Internet browsers
c) Information search in WWW
d) Text formatting with examples.

9 Explain the following: 14
a) HTML
b) Structure of HTML
c) Text formatting with examples.

**OR**

10 Explain the following: 14
a) HTML
b) Hyperlinks
c) Frames and forms in HTML
d) List tags with examples.

****

**Code No. 1268/CBCS**

# FACULTY OF PHARMACY

**B. Pharmacy - I Semester (Backlog) (CBCS) Examination, August 2018**

**Subject: General Pharmacy**

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions. All Questions carry equal marks.**

1 a) Write a note on affiliating bodies for pharmaceutical education in India. 7
b) Explain in detail about various career opportunities in pharmacy. 7

**(OR)**

c) Discuss about the historical development of pharmaceutical industry in India. 4
d) Explain each term of monograph by taking an example of a drug. 10

2 a) Explain in detail about the selection and care of weights and balances. 4
b) What are isotonic solutions? Write about different methods of adjusting isotonicity. 6
c) Calculate 50% V/V and 25% V/V alcohol required to prepare 150 ml of 40% V/V alcohol by allegation method. 4

**(OR)**

d) Define Normality, Molarity and Molality. 4
e) Write a note on minimum weigbable amounts 5
f) Find the proportion of dextrose required to produce a solution isoomotic with blood plasma (Molecular weight of dextrose – 180). 5

3 a) Discuss about the care required in handling prescriptions. 4
b) Give a note on factors influencing in dose calculations. 4
c) Define prescription. Explain Parts of prescription. 6

**(OR)**

d) Explain various types of dose calculations for infants and children. 5
e) What are the probable sources of errors in a prescription? 5
f) Explain modern methods of prescribing medicines. 4

4 a) Give storage conditions for various medicinal products. 4
b) Write a note on various types of materials used in preparation of containers and closures in detail. 10

**(OR)**

c) Write in detail about blister, strip and bubble packing. 7
d) Write a note on : 3+4
(i) Ideal properties of the container closure system.
(ii) Child resistant containers.

5 a) What are surfactants ? Enlist different classes of surfactants and their Pharmaceutical applications. 7
b) Explain various therapeutic and diagnostic uses of radiopharmaceuticals. 7

**(OR)**

c) Write about containers used in medical gases. Explain handling and storage of medical gases. 6
d) Give a note on : 3+3+2
i) Colouring agents
ii) Vehicles
iii) Sweetening agents

****

**Code No. 1269/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy - I Semester Main (Backlog) Examination, August 2018

**Subject: Human Anatomy & Physiology-I**

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions, All Questions carry equal marks.**

1 a) Discuss the properties and functions of epithelial tissue. 7 m
b) Discuss the active and passive transport of substances across cell membrane. 7 m

**(OR)**

c) Describe the structure and functions of Nervous tissue. 7 m
d) Explain the structure and functions of cell and components with a neat labeled diagram. 7 m

2 a) Explain the structure and functions of following bones with neat Labeled diagram. 14 m
(i) Axis (ii) Scapula (iii) Femur (iv) Rib

**(OR)**

b) Discuss the various types and movement of joints. 8 m
c) Write a note on neuromuscular junction. 6 m

3 a) Explain the composition and functions of blood. 8 m
b) Write the functions of Lymph. 6 m

**(OR)**

c) Explain the ABO and Rh blood Groups. 8 m
d) Write a note on thymus gland. 6 m

4 a ) Explain structure of heart with a neat labeled diagram. 10 m
b) Write about ECG. 4 m

**(OR)**

c) Describe the factors affecting blood pressure. 8 m
d) Explain the conducting system of heart. 6 m

5 a) Discuss the anatomy of ear with a neat labeled diagram. 10 m
b) Write the functions of Skin. 4 m

**(OR)**

c) Explain the physiology of eye. 10 m
d) Describe the anatomy of taste bud. 4 m

*

**Code No. 1267/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I-Semester (CBCS) (Backlog) Examination, July 2018

**Subject: Basic Computer Applications-I**

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions, All Questions carry equal marks.**

1 a) What is Memory ? Explain different types of Memory.
b) Explain characteristics of Computer.

**OR**

c) Draw block diagram of Computer and write different input and output devices.

2 a) Explain the process of Spelling and Grammar Checking.
b) Explain concept of Charts and graphs.

**OR**

c) Write short note on
(i) Auto format (ii) Merging and Centering text (iii) Wrapping text.

3 a) Illustrate about Animation and Apply design .
b) Explain about concept of graphics in MS Power Point.

**OR**

c) Create table with primary key in MS Access.
d) How to make relationship between two tables.

4 a) How to search information in WWW?

**OR**

b) Explain concept of E-Mail.

5 a) What is a frame ? Explain frameset tag attribute and frame tag attribute.
b) Explain concept of form and form controls with examples.

**OR**

c) Write short note on
(i) Paragraph Tag with alignments.
(ii) Font Tags with color, size.
(iii) Image Tag.

*

**Code No. 1270/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I–Semester (CBCS) (Backlog) Examination, August 2018

## Subject: Mathematics

**Time: 3 Hours** **Max. Marks: 70**

**Note: Answer all questions. All questions carry equal marks.**

1. (a) If $\log_a abc = x + 1$, $\log_b abc = y + 1$, and $\log abc = z + 1$ Then show that $xyz = x + y + z + 2$.
   (b) If Sin a = 4/5 and sin B = 5/13 find the value of sin (A + B), cos (A + B)

**(OR)**

   (c) Find the Value of x , $\log\frac{x}{5} + \log\frac{5}{x} = \frac{5}{2}$

   (d) If Tan (A-B) = $\frac{7}{24}$ and Tan A = 4/3, show that A + B = $\frac{®}{2}$.

2. (a) Use first principles to find the tan x derivative
   (b) Find the maxima and minima of the function f (x) = $4x - 3x^2 - 4$

**(OR)**

   (c) If « = $\log\left(\frac{x^3+y^3}{x-y}\right)$ prove that $x\frac{\partial «}{\partial x} + y\frac{\partial «}{\partial y} = 2$.

   (d) If $z = x^3 - xy + y^3$. Find $\frac{\partial z}{\partial x}$ and $\frac{\partial z}{\partial y}$.

3. (a) E valuate $\int \frac{1}{1+\sin x}dx$
   (b) E valuate $\int \cos x \cos 2x \cos 3x\, dx$

**(OR)**

   (c) E valuate $\int \frac{Tanx}{1+\cos^2 x}dx$
   (d) Find the area bounded by the parabolas $Y^2 = 4ax$ and $x^2 = 4by$

4. (a) Show that $\begin{vmatrix} 1 & 1 & 1 \\ a & b & c \\ a^3 & b^3 & c^3 \end{vmatrix}$ = (a-b) (b-c) (c-a) (a + b + c)
   (b) Solve the system of equations x + y + z = 1, x + 2y+3z = 6, x + 3y+4z = 6, by matrix Inversion method.

**(OR)**

   (c) Find the value of x if $\begin{vmatrix} x+1 & 2 & 3 \\ 1 & x+2 & 3 \\ 1 & 2 & x+3 \end{vmatrix} = 0$

   (d) If A = $\begin{bmatrix} 3 & -5 \\ -4 & 2 \end{bmatrix}$ show that $A^2 - 5A = 14$ I.

5. (a) Write about linear and non – linear graphs.

**(OR)**

(b) Define degree, order of a differential equation and solve $(x+1)\frac{dy}{dx} - y = e^{3x}(x+1)^2$

*******

**Code No. 1271/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy - I Semester (CBCS) (Backlog) Examination, August 2018

### Subject : Biology

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions, All Questions carry equal marks.**

1 a) Discuss about living cell inclusions of plant cell.

b) Describe a detailed note on simple permanent tissues.

**(OR)**

c) With neat labeled diagram explain in detail internal structure of root and stem.

2 a) Explain inflorescence in detail.

b) Describe various morphological characters of leaf.

**(OR)**

c) Discuss various types of leaf modification with their significance.

3 a) Discuss the taxonomy of solanaceae family.

b) Describe vegetative and floral characters of Umbelliferae family.

**(OR)**

c) Describe vegetative, floral characters and taxonomy of leguminoceae family.

4 a) Describe in detail meiosis with neat labeled diagram.

b) Write a note on histology of rabbit kidney.

**(OR)**

c) Differentiate between plant and animal cell.

d) Write a note on histology of rabbit pancreas.

5 a) Describe the life history of plasmodium with neat labeled diagram.

**(OR)**

b) Describe the morphology and life history of tryphosoma with neat labeled diagram.

*

**Code No. 1266/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I-Semester (CBCS) (Backlog) Examination, July 2018

### Subject: Pharmaceutical Inorganic Chemistry

**Time: 3 Hours** **Max.Marks: 70**

**Note: Answer all questions, All Questions carries equal marks.**

1 a) Write the classification of inorganic pharmaceuticals based on their therapeutic uses with examples. 10

b) Explain the principle and procedure involved in the limit test for iron. 4

**OR**

c) List out various sources of impurities in Pharmaceutical substances. Explain any two of them with suitable examples. 6

d) Describe the principle and procedure involved in the limit test for arsenic with a neat labeled diagram. 8

2 a) Define 'Antacids' and Laxatives'. Give the preparation and tests for Purity of 2+6
(i) Aluminium hydroxide gel (ii) Magnesium sulphate.

b) Give the composition, mode of supply and uses of 6
(i) Haemodialysis fluid (ii) Peritoneal dialysis fluid.

**OR**

c) Explain the role of electrolytes in body fluids. 3

d) Write the preparation, properties, uses and official preparations of following: (i) Sodium Chloride (ii) Calcium gluconate 4+4

e) Describe the principle and procedure involved in the assay of ammonium Chloride. 3

3 a) What are Haematinics ? Give the preparation, tests for purity and uses of ferric ammonium Citrate and ferrous sulphate. 1+6

b) Define absorbent, adsorbent and suspending agents with examples. 3

c) Write a note on desiccants. 4

**OR**

d) Write the preparation, properties and uses of following: 3x3
(i) Ferric ammonium Citrate.
(ii) Magnesium Stearate.
(iii) Sodium metabisulphite.

e) Write a note on suspending agents. 5

4 a) What are expectorants ? Give the preparation, properties and assay of potassium iodide. 5

b) Write the preparation, properties and uses of following compounds: 3x3
(i) Sodium nitrite
(ii) Copper sulphate
(iii) Boric acid.

**OR**

..2

c) What are anti-infective agents ? Write the preparation, assay and uses of following: 1+8
(i) Potassium permanganate
(ii) Silver nitrate.

d) Define 'astringents'? Explain the preparation, tests for purity and properties of Zinc sulphate. 1+4

5 a) Write the significance of fluorides in dental products. 5

b) Explain the preparation, properties and uses of following: 3x3
(i) Hydrogen peroxide
(ii) Zinc Oxide
(iii) Calcium Carbonate

**OR**

c) What are diagnostic agents ? Discuss the preparation, properties, tests for purity and assay of Barium sulphate. 1+5

d) Write a note on plaster of Paris. 4

e) What are Cements and fillers ? Write the preparation, and properties of Zinc Oxide. 1+3

*

**Code No. 1134/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I-Semester (CBCS) (Suppl.) Examination, January 2018

**Subject : Pharmaceutical Inorganic Chemistry**

**Time : 3 Hours** **Max. Marks: 70**

***Note: Answer all questions. All questions carry equal marks.***

1 (a) What is an impurity? Explain how impurities get incorporated in the official pharmaceutical substances. (1+9)

(b) Explain the principle and procedure involved in the limit test for sulphates. (4)

**OR**

(c) Classify pharmaceutical inorganic compounds based on their therapeutic applications with examples. (8)

(d) Explain the following with respect to limit tests. (2+1+3)

(i) Role of citric acid and ammonia in limit test for iron.

(ii) Use of dil $HNO_3$ in limit test for chlorides.

(iii) Principle involved in limit test for arsenic

2 (a) What are electrolyte replenishes? Write the preparation and assay of sodium chloride. (1+4)

(b) Explain the preparation, properties and uses of calcium gluconate. (4)

(c) Write a note on haemodialysis fluids. (2)

**OR**

(d) What are antacids? Give the preparation and assay of magnesium hydroxide mixture and aluminium hydroxide gel. (1+8)

(e) Write the following :

(i) Preparation and uses of magnesium sulphate (2)

(ii) Assay of ammonium chloride (3)

3 (a) List out the official ion compounds used as haematinics. Write the preparation, properties and assay of ferrous sulphate. (1+4)

(b) Write a note on following: (5+4)

(i) Activated charcoal

(ii) Bentonite

**OR**

(c) What are antixoidants? Give the preparation, properties, tests for purity and uses of sodium metabisulphite. (1+5)

(d) Write the preparation, assay and uses of following: (4+4)

(i) Ferrous sulphate (ii) Manesium stearate

4 (a) Explain the mechanism of cyanide poisoning. Give the preparation, assay and mechanism of any one inorganic compound used in the treatment of cyanide poisoning. (2+4)

(b) Define the terms ‘emetics’ and ‘expectorants’ with examples. (2)

(c) Write the preparation, properties and uses of following compounds. (3+3)

(i) Copper sulphate (ii) Potassium iodide

**OR**

(d) Give the preparation, tests for purity and uses of following: (3x3)

(i) Zinc sulphate (ii) Boric acid (iii) Potassium permanganate

(e) Write a note on Activated Dimeticone. (5)

..2

5 (a) Explain the preparation, properties and uses of following : (4+4)
(i) Plaster of Paris (ii) Zinc oxide

(b) Write a brief note on diagnostic agents. (6)

**OR**

(c) Define the following terms with examples. (3)
(i) Diagnostic agents
(ii) Dentifrices
(iii) Cements and fillers

(d) Write the preparation, properties and uses of following compounds. (4+4+3)
(i) Zinc oxide
(ii) Hydrogen peroxide
(iii) Sodium fluoride

*****

**Code No. 1137/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I-Semester (CBCS) (Suppl.) Examination, January 2018

**Subject : Human Anatomy and Physiology - I**

**Time : 3 Hours** **Max. Marks: 70**

***Note: Answer all questions. All questions carry equal marks.***

1 (a) Define, classify tissues and explain in detail about epithelial tissues. (10)
(b) Define the following terms: (4)
(i) Anterior (ii) Superior (iii) Proximal (iv) Lateral

**OR**

(c) Classify connective tissues and write about cartilage in detail. (8)
(d) Draw a neat labled diagram of cell and explain the structure and functions of mitochondria. (6)

2 (a) What is a Joint? Explain different types of synovial joints with examples. (8)
(b) Write about the structure of a bone and add a note on its functions. (6)

**OR**

(c) Explain the microscopic structure of a skeletal muscle in detail with a neat labeled diagram. (9)
(d) Write short notes on Neuromuscular junction. (5)

3 (a) Define haemostasis and explain different steps involved in haemostasis. (9)
(b) Write about the composition and functions of plasma. (5)

**OR**

(c) Explain the structure and functions of spleen with a neat labeled diagram. (7)
(d) What are the different types of lymph trunks and ducts involved in draining of lymph? (7)

4 (a) Define and explain the events of cardiac cycle. (10)
(b) Explain about the coronary circulation of blood. (4)

**OR**

(c) What is meant by blood pressure and write about hormonal regulation of blood pressure. (9)
(d) Explain the phases of action potential. (5)

5 (a) Explain the structure of ear with a neat labeled diagram. (9)
(b) Write short notes on physiology of taste buds. (5)

**OR**

(c) Write in detail about the physiology of audition. (9)
(d) Write about the different types of photoreceptor cells present in the retina of eye. (5)

*****

**Code No. 1136/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I-Semester (CBCS) (Suppl.) Examination, January 2018

### Subject : General Pharmacy

**Time : 3 Hours** **Max. Marks: 70**

***Note: Answer all questions. All questions carry equal marks.***

1 (a) Write in detail about pharmaceutical industry and its development in India. (7)
(b) Write a note on the following: (7)
(i) British Pharmacopia (B.P).
(ii) Indian Pharmacopia (I.P.)
(iii) Martindale

**OR**

(c) Write a note on the following: (14)
(i) Pharmaceutical education in India
(ii) Evolution of pharmacy

2 (a) Write a note on the following : (7)
(i) Alcohol dilution
(ii) Isotonic solutions
(b) Calculate the amount of 70% and 30% alcohol to be mixed to get 50% alcohol by using allegation method. (7)

**OR**

(c) Write a note on the following: (7)
(i) Proof spirit
(ii) Alligation method
(d) Calculate the volume of 95 percent alcohol required to prepare 600ml of 60% alcohol by alcohol dilution method. (7)

3 (a) Define Prescription. Write various parts of prescription and modern methods of prescription. (8)
(b) Discuss the sources of errors during handling and dispensing of prescription. (6)

**OR**

(c) Write a note on the following :
(i) Calculation of dose for infants and children (7)
(ii) Factors influencing dose (7)

4 (a) Define container and closure. Write a note on different materials used in the preparation of containers and closures. (14)

**OR**

(b) Classify different containers and closures and discuss them? Write a note on Blister and strip packaging.

5 (a) Write a note on medical gases and their uses. (7)
(b) Write a note on the following: (7)
(i) Preservatives (ii) Antioxidants

**OR**

(c) Write a note on radio pharmaceuticals and their therapeutic and diagnostic uses. (7)
(d) Write a note on the following: (7)
(i) Colouring agents
(ii) Flavouring agents

*****

Code No. 1135/CBCS

# FACULTY OF PHARMACY

**B. Pharmacy I-Semester (CBCS) (Suppl.) Examination, January 2018**

**Subject : Basic Computer Applications – I**

**Time : 3 Hours** **Max. Marks: 70**

***Note: Answer all questions. All questions carry equal marks.***

1 (a) What is operating system? Explain functions of OS.
(b) Explain viruses and different types of viruses.

**OR**

(c) Write about different types of printers.

2 (a) Illustrate about Macro's.
(b) Explain about working with graphics in MS Word.

**OR**

(c) Write about features of MS Excel.
(d) Explain about data types in MS Excel.

3 (a) Describe the working process of Text in MS Power Point.
(b) Explain about concept of templates with examples.

**OR**

(c) Write short notes on :
(i) Query (b) Forms (c) Reports from MS Access

4 (a) What is WWW? Write its functions.

**OR**

(b) What is Search Engine? Explain how search engine works and components of search engine.

5 (a) What is List? Explain different types of List tags with example program.
(b) Write short note on :
(i) Achor Tag (ii) Marque Tag (iii) Heading Tag

**OR**

(c) Write a HTML program for creating a table which contains name, roll number, marks, grade as heading and enter 5 students information into table and also apply table width, cell podding, cell spacing, border as table.

*****

**Code No. 1138/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I-Semester (CBCS) (Suppl.) Examination, January 2018

**Subject : Mathematics**

**Time : 3 Hours** **Max. Marks: 70**

***Note: Answer all questions. All questions carry equal marks.***

1 (a) Prove that $\log_x (a/b) = \log_x a - \log_x b$, for a > 0, b > 0.

(b) If Tan A = $\frac{1}{2}$ and Tan B = $\frac{1}{3}$ , where A and B are acute angles then find A + B.

**OR**

(c) Find the value of $\frac{1}{\log_x xy} + \log_{xy} y$ .

(d) Show that cos A + cos ($240^o$ - A) + cos ($240^o$ + A) = 0.

2 (a) Find the derivative of tanx using first principle.

(b) Show that $\lim_{x\to 0} \frac{Tanx}{x^2} = 1$

**OR**

(c) Prove that $\lim_{x\to 3} \frac{x^3 - 6x - 9}{x^4 - 81} = \frac{7}{36}$ .

(d) If $z = 3x^2 - 2xy + 7y^2$ . Find $\frac{\partial z}{\partial x}, \frac{\partial z}{\partial y}$ .

3 (a) Find $\int \frac{x^3 - 3x^2 + 2}{x} dx$ .

(b) Evaluate $\int \frac{2x + 6}{x^2 + 6x + 11} dx$ .

**OR**

(c) Evaluate $\int \frac{1}{5 + 4\cos x} dx$ .

(d) Evaluate $\int \frac{1 - \sin x}{x + \cos x} dx$

4 (a) If $A = \begin{bmatrix} 3 & -2 \\ 1 & 6 \end{bmatrix}$, $B = \begin{bmatrix} 4 & -1 \\ 2 & 5 \end{bmatrix}$ then find AB and BA.

(b) Find the value of x if $\begin{vmatrix} 3x-8 & 3 & 3 \\ 3 & 3x-8 & 3 \\ 3 & 3 & 3x-8 \end{vmatrix} = 0$

**OR**

(c) Show that $\begin{vmatrix} a & b & c \\ a^2 & b^2 & c^2 \\ a^3 & b^3 & c^3 \end{vmatrix} = (abc)(a-b)(b-c)$.

(d) If $A = \begin{bmatrix} 2 & 0 \\ 3 & -5 \end{bmatrix}$ show that $A^2 + 3A - 10I = 0$.

5 (a) Find the equation of line passing through the points (2, - 3), (- 4, 3).

(b) Define linear and non-linear graphs with an example to each.

**OR**

(c) Show that the points (- 1, 7), (3, - 5), (4, - 8) are collinear.

(d) Solve the differential equation $x\frac{dy}{dx} = 3y$.

*****

**Code No. 1139/CBCS**

# FACULTY OF PHARMACY

## B. Pharmacy I-Semester (CBCS) (Suppl.) Examination, January 2018

**Subject : Biology**

**Time : 3 Hours** **Max. Marks: 70**

***Note: Answer all questions. All questions carry equal marks.***

1 (a) Describe the structure of plant cell.
(b) Define tissue. Describe the different types of simple permanent tissue.

**OR**

(c) Describe the biology of dicot root with the help of a neat and labeled diagram.
(d) Write a note on non-living cell inclusions.

2 (a) Define inflorescence. Describe types of cymose inflorescence.
(b) Discuss various leaf modifications.

**OR**

(c) What is pericarp? Describe the types of simple fleshy fruit.
(d) Discuss underground stem modifications.

3 (a) Write a note on medicinal and economic importance of Solanaceae.
(b) Discuss the floral characters of Apocynaceae.

**OR**

(c) Draw the floral diagrams and give floral formula of any two sub-families of Leguminosae.
(d) Describe the floral characters of umbeliferae.

4 (a) Draw neat and labeled diagram of the ultra structure of animal cell.
(b) Discuss the mitotic cell division in animals.

**OR**

(c) Differentiate plant and animal cell.
(d) Draw neat and labeled diagram of histology of liver of Rabbit and a note on its functions.

5 (a) Discuss the life-cycle and pathogenicity of Entamoeba histolytica.
(b) Discuss the role of Housefly and Mosquito as agents for spreading diseases.

**OR**

(c) Describe the life-history of trypanosoma.
(d) Describe the life-history of Ascaris.

*****