

FACULTY OF PHARMACY

B. Pharmacy I – Year (Suppl.) Examination, October 2016

Subject: Anatomy, Physiology and Health Education

Time: 3 Hours

Max.Marks: 70

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

- 1 a) Describe the general features of epithelial tissue. 8
 b) Explain the structure, location and mode of control of skeletal, cardiac and smooth muscle. 6
- OR**
- c) Explain the structure and functions of the following bones with neat diagrams. 14
 a) Atlas b) Scapula c) Humerus d) Femur
- 2 a) Define reflex Arc. Explain general components of reflex AVC. 8
 b) Explain physiology of nerve impulse. 6
- OR**
- c) Explain the ABO and Rh blood groups. 8
 d) What are AV and SL valves? How do they operate? 6
- 3 a) Explain the physiology of respiration. 8
 b) Explain the following terms: 6
 a) Vital Capacity b) Hypoxia c) Anoxia
- OR**
- c) Discuss the gross anatomy of elementary canal. 8
 d) Write a note on thyroid hormone. 6
- 4 a) Discuss about physiology of urine formation. 8
 b) Describe the structure and functions of urinary bladder. 6
- OR**
- c) Explain the anatomy of eye with a neat labeled diagram. 8
 d) Write about structure and functions of taste buds. 6
- 5 a) Explain different stages of inflammation including tissue repair. 8
 b) Discuss temporary family planning method. 6
- OR**
- c) Define neoplasm. Explain various types of neoplasms. 8
 d) Write a note on pulmonary embolism. 6



FACULTY OF PHARMACY**B. Pharmacy I – Year (Suppl.) Examination, November 2016****Subject: Pharmaceutics – I (General and Dispensing Pharmacy)****Time: 3 Hours****Max.Marks: 70****Note: Answer all questions. All questions carry equal marks.**

- 1 a) Write about Registration procedure for pharmacist. 7
 b) Write a brief note on development of pharmaceutical education in India. 7
OR
 c) Write a note on pharmacy as career. 4
 d) What is proof spirit? Convert 40% v/v and 60% v/v to proof strength. 5
 e) Prepare 600 ml of 40% and 60% alcohol from 95% alcohol. 5
- 2 a) Define Prescription. Describe various parts of prescription with suitable examples. 8
 b) Discuss the sources of errors during handling and dispensing of prescription. 6
OR
 c) Write a note on following dosage forms with examples:
 i) Effervescent granules ii) Dusting powers iii) Dentifrices 7
 d) Write a brief note on:
 i) Prescription containers ii) Labeling and packing of container 7
- 3 a) What are mixtures? Classify different types of mixtures. Discuss general procedure for dispensing mixtures. 6
 b) Write different methods of preparation of following dosage forms
 i) Aromatic waters ii) Suspensions iii) Emulsions 8
OR
 c) Define the following dosage forms with examples
 (i) Lotions (ii) Mixtures (iii) Elixirs (iv) Collodions (v) Liniments
 (vi) Throat paints (vii) Gargles 7x2=14
- 4 a) Write a short note on:
 i) Cold cream ii) Simple ointment 6
 b) What are suppositories? What are the different bases used in preparation and write methods of preparation. 8
OR
 c) Explain the therapeutic incompatibility with suitable examples and give the methods for overcoming this incompatibility. 7
 d) Identify the type of incompatibility in the following prescription and add a note on how to rectify the incompatibility.
 i) R_x Menthol – 5 gm, Camphor – 5 gm, Ammonium chloride – 30 gm
 Light magnesium carbonate – 60 gm. Make an insufflation. 7
 ii) R_x Ferric chloride solution-2 ml, Sodium salicylate-4gm, Water-up to 90 ml.
 Prepare a mixture. 7
- 5 a) What is extraction? Write various solvents used in extraction processes. 5
 b) Explain double maceration and triple maceration processes. 9
OR
 c) Discuss in detail about preparation, therapeutic and diagnostic uses of any two radio pharmaceuticals. 10
 d) Discuss containers used for medicinal gases. 4

FACULTY OF PHARMACY**B. Pharmacy I – Year (Suppl.) Examination, November 2016****Subject: Basic Computer Applications****Time: 3 Hours****Max.Marks: 70****Note: Answer all questions. All questions carry equal marks.**

- 1 a) Explain primary or main memory of computers.
b) Explain computer generations.
- OR**
- c) Write the principles of flow charting. List commonly used symbols in flowcharts.
d) What is operating system? Write importance and functions of operating system.
- 2 a) Explain the control statements with examples:
i) IF – ELSE ii) FOR iii) GOTO
- OR**
- b) Explain different types of functions and elements used in C-Language.
- 3 a) Explain features of MS-Word.
b) Explain about
i) Spellings and Grammar
ii) Mail merge in MS-Word with examples.
- OR**
- c) Describe the basic formatting of spread sheet using MS-Excel.
d) Write the mathematical and statistical functions in MS-Excel.
- 4 a) What is Power point? Explain the procedure for preparation of Power point.
b) What are wizards and templates? Explain their use in MS-Power point.
- OR**
- c) Briefly describe the following of MS-Access.
i) Data types ii) Queries iii) Sorting & Filtering iv) Exporting data
- 5 a) Explain the following:
i) Information search in WWW ii) Internet iii) E-Mail iv) HTML
- OR**
- b) Describe the chemical database design and their tools.
c) Write the features of SQL. Give an overview of SQL reserved words.

FACULTY OF PHARMACY

B. Pharmacy I-Year (Suppl.) Examination, November 2016

Subject : Mathematics

Time : 3 Hours

Max. Marks: 70

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

- 1 (a) Find x from the equation $a^x \cdot c^{-2x} = b^{3x+1}$.
- (b) If $\sin \theta = \frac{3}{5}$ and θ is acute, Find the value of $2 \tan \theta + 3 \sec \theta + 4 \sec \theta \cdot \operatorname{cosec} \theta = \frac{163}{12}$

OR

- (c) Find the value of $\log_8 128$.
- (d) If $\cot \theta = \frac{5}{2}$ and θ is acute show that $\frac{5 \cos \theta + \sin \theta}{5 \cos \theta - 2 \sin \theta} = \frac{29}{21}$
- 2 (a) Use first principles to find the $\sin x$ derivative.
- (b) Find the maxima and minima of the function $f(x) = 3x^3 - 9x^2 - 27x + 30$

OR

- (c) If $u = \tan^{-1} \left(\frac{x^3 + y^3}{x - y} \right)$, $x \neq y$ show that $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} = \sin 2u$
- (d) If $z = 3x^2 - 2xy + 7y^2$. Find $\frac{\partial z}{\partial x}$ and $\frac{\partial z}{\partial y}$.

- 3 (a) Find $\int \frac{dx}{1 + \cot x}$
- (b) Evaluate $\int \cos^3 x \sin^4 x \, dx$

OR

- (c) Evaluate $\int \frac{\sin 2x}{1 + \sin^4 x} dx$
- (d) Find the area between the cubic $y = x^3$ and parabola of $y = 4x^2$

..2..

- 4 (a) Find the values of the determinant $\begin{vmatrix} 1 & 1 & 1 \\ a & b & c \\ b+c & c+a & a+b \end{vmatrix}$
- (b) Solve the system of equations $x + y + z = 1$, $2x + 2y + 3z = 6$, $x+4y+9z = 3$, by matrix "Inversion" method.

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 $\begin{vmatrix} \cos r & \sin \infty \\ -\sin r & \cos \infty \end{vmatrix}$ show that $A \cdot A^1 = A^1 \cdot A = I$.

- 5 (a) Write about Linear and Non-Linear graphs.

OR

- (b) Find the equation of circle passing through the points (1, 1) (2, -1), (3, 2).

G.Pulla Reddy College of Pharmacy
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FACULTY OF PHARMACY

B. Pharmacy I – Year (Suppl.) Examination, October 2016

Subject: Pharmaceutical Inorganic Chemistry

Time: 3 Hours

Max.Marks: 70

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

- 1 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
- OR**
- c) Define limit test. Explain the principle and procedure involved in the limit test for arsenic with a neat labelled diagram. 1+8
- d) Write the general procedure for qualitative tests for cations. 5
- 2 a) What are electrolyte replenishers? Write the method of preparation, properties and assay of calcium gluconate. 1+4
- b) Give the preparation, assay and uses of the following compounds. 3x3=9
- i) Magnesium sulphate ii) Potassium citrate iii) sodium bicarbonate
- OR**
- c) What are antacids? Give the preparation, properties and assay of magnesium carbonate and aluminium hydroxide gel. 1+4+4
- d) Write a note on hemodialysis fluids. 5
- 3 a) Give the preparation, properties, tests for purity and uses of sodium sulphite and ferrous sulphate. 4+4
- b) What are suspending agents? Add a note on activated charcoal. 1+5
- OR**
- c) Give the preparation and uses of the following:
- i) Sodium phosphate ii) Aluminium stearate iii) Zinc chloride 3x3=9
- d) Write a note on purified water. 5
- 4 a) Define expectorants. Give the preparation, properties assay and uses of potassium iodide and ammonium chloride. 1+5+5
- b) Explain the significance of nitrous oxide. 3
- OR**
- c) Give the preparation, properties, limit tests and uses of the following compounds: 5+5+4
- i) Sodium thiosulphate ii) Potassium antimony tartarate iii) Copper sulphate
- 5 a) Give the preparation, properties and uses of the following compounds: 4x3=12
- i) Barium sulphate ii) Zinc oxide iii) Potassium perchlorate
- b) Why fluorides are used as anticaries agents? 2
- OR**
- c) Explain the principle and procedure involved in the assay of hydrogen peroxide and potassium permanganate. 4+4
- d) Write a note on activated dimethicone. 6

FACULTY OF PHARMACY

B. Pharmacy I – Year (Suppl.) Examination, November 2016

Subject: Biology

Time: 3 Hours

Max.Marks: 70

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

- 1 a) Write an essay on mitosis.
b) Discuss general characters of fungi.
OR
c) Give the morphological details of a flower.
d) Describe the plant cell.
- 2 a) List out the medicinal plants from leguminosae and give their importance.
b) Give status of apocynaceae in the classification.
OR
c) Mention the medicinal value of rubaceae.
d) Describe the inflorescence of umbelliferae.
- 3 a) Discuss hybridization and its advantages in plant science.
b) How does mutation helps in the origin of new species?
OR
c) What are the differences between absorption and transpiration?
d) Describe the relevance of photosynthesis in view of food grain production.
- 4 a) Report the differences between animal and plant cell.
b) Describe the histology of kidney.
OR
c) Draw a neat labeled diagram of frog alimentary canal.
d) Why ovary is known as endocrine gland?
- 5 a) Describe in detail "Entomoeba", with the help of a diagram.
b) Give the details of life history of housefly.
OR
c) Write an essay on leishmaniasis.
d) Define the word vector and give examples.

FACULTY OF PHARMACY

B. Pharmacy I-Year (Main) Examination, May 2016

Subject : Pharmaceutics-I (General and Dispensing Pharmacy)

Time : 3 Hours

Max. Marks: 70

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

- 1 (a) Discuss about the career opportunities available for Pharmacy profession. (7)
 (b) Discuss about development of Pharmacy education in India. (7)

OR

 (c) Convert 70° UP and 40° OP to percentage v/v of alcohol. (6)
 (d) Calculate the quantity of sodium chloride required to prepare 400 ml of a 0.9 percentage of solution. (4)
 (e) Calculate the dose for a child of 4 years, when the adult dose of drug is 100 mg. (4)

- 2 (a) Define Prescription. Describe various parts of prescription with suitable examples. (7)
 (b) Write about sources of errors in handling of prescription and care required in dispensing prescriptions. (7)

OR

 (c) Define a dosage form. Classify dosage forms and write their advantages and limitations. (6)
 (d) Write a short note on containers and closures. (4)
 (e) Write a short note on labeling and packing. (4)

- 3 (a) What are syrups? Write brief note on different methods of preparation of syrups with examples. (5)
 (b) What are aromatic waters? Describe different methods used to prepare Aromatic waters. (5)
 (c) Write short note on Emulsifying agents. (4)

OR

 (d) Define Emulsion. Describe different types and methods of preparation of emulsions. (6)
 (e) Write about the formulation of suspensions with suitable examples. (5)
 (f) Differentiate between lotions and liniments. (3)

- 4 (a) What are the different bases used in preparation of ointments? (7)
 (b) What are suppositories? What are the different bases used in preparation of suppositories? Write different methods of preparation of suppositories. (7)

OR

 (c) Define Incompatibility. Explain different types of incompatibility with examples. (8)
 (d) Identify the type of incompatibility in the following prescription and add a note on how to overcome the incompatibility.
R_x Sodium bi carbonate – 1.5 g, Borax – 1.5 g, Phenol – 0.75 g, Glycerin – 25.00 g,
 Water – up to 100.00 ml. Prepare a spray solution. (6)

- 5 (a) What is the process of extraction? Discuss various methods of preparation of Tinctures and Extracts. (6)
 (b) Explain continuous hot percolation process with neat labeled diagram. (8)

OR

 (c) Write a note on preparation and therapeutic applications of radio pharmaceuticals. (6)
 (d) What are official medicinal gases and uses? Discuss about containers, handling and storage of medicinal gases. (8)

FACULTY OF PHARMACY**B. Pharmacy I-Year (Main) Examination, May 2016****Subject : Pharmaceutical Inorganic Chemistry****Time : 3 Hours****Max. Marks: 70****Note: Answer all questions. All questions carry equal marks.**

- 1 (a) Give any four characteristics tests for group V Cations. (6)
 (b) Write the principle and procedure involved in the limit test for lead and chlorides. (4+4)
OR
 (c) With a neat labeled diagram. Explain the principle and procedure involved in the limit test for Arsenic. (8)
 (d) Discuss about source in Impurities in pharmaceutical preparations. (6)
- 2 (a) What are laxatives? Give the method of preparation, tests for purity and uses of magnesium sulphate and sodium phosphate. (2+3+3)
 (b) Write a note on haemodialysis fluids. (6)
OR
 (c) Define Antacids. Give the method of preparation, properties and uses of magnesia and calcium carbonate. (1+4+4)
 (d) Add a note on Adsorbents. (5)
- 3 (a) Define Haematinics. Give the preparation, test for purity and uses of ferrous gluconate and ferric ammonium citrate. (1+3+3)
 (b) Write a note on purified water and Desiccants. (4+3)
OR
 (c) Add a note on Antioxidants. (5)
 (d) Give the preparation, properties and uses of following compounds: (3x3)
 (i) Ferrous fumarate (ii) Sodium phosphate
 (iii) Sodium metabisulfite
- 4 (a) Discuss about treatment of cyanide poisoning. (7)
 (b) Write a note on Expectorants. (7)
OR
 (c) What are Inhalants? Name some official inhalants. (2)
 (d) Give the preparation, properties, test for purity and uses of following compounds. (3x4)
 (i) Sodium nitrite (ii) Zinc sulphate (iii) Ammonium chloride
- 5 (a) Define the terms with examples. (4)
 (i) Sedatives (ii) Anti-neoplastic agents
 (iii) Diagnostic agents (iv) Anti-depressants
 (b) Define Astringents. Give the preparation, test for purity and uses of calcium hydroxide and zinc oxide. (2+4+4)
OR
 (c) Define Dentifriccs and give its significance. (1+3)
 (d) Give the preparation and uses of potassium bromide and potassium perchlorate. (6)

FACULTY OF PHARMACY

B. Pharmacy I-Year (Main) Examination, May 2016

Subject : Basic Computer Applications

Time : 3 Hours

Max. Marks: 70

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

- 1 (a) What is Computer? Explain the characteristics of computers.
(b) Discuss about Magnetic Disks for storage of memory.
OR
(c) What is flow chart? Draw flowchart to determine the roots of quadratic equation.
(d) What is computer virus? Write different types of viruses. How it will affect computer?
- 2 (a) Explain the following:
(i) Data types (ii) Input- Output statements used in C-Language.
OR
(b) Explain the different loop statements used in C-Language with examples.
- 3 (a) What are the different tools available in MS-office and explain them?
(b) What is formatting? Discuss the formatting paragraphs and tables in MS-Word.
OR
(c) Explain the important features of MS-Excel.
(d) Explain different types of charts and chart contents available in MS-Excel.
- 4 (a) Explain the following: (i) Slide Design (ii) Custom animation (iii) Views of MS-PPT.
OR
(b) Define database. How to create tables in MS-Access?
(c) Write brief note on : (i) Sorting & Filtering (ii) Table relationships
- 5 (a) Write a brief note on the following:
(i) Pharmaceutical resources in WWW
(ii) Search Engines
(iii) Internet Browsers
(iv) E-Mail
OR
(b) Write the different types of indexing tools and search strategies.
(c) Write about SQL commands.

FACULTY OF PHARMACY

B. Pharmacy I-Year (Main) Examination, April / May 2016

Subject : Mathematics

Time : 3 Hours

Max. Marks: 70

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

- 1 (a) (i) Solve the equation for x
 $e^{2x} - e^x - 6 = 0$.
 (ii) In a triangle ABC, prove that $\sin 2A + \sin 2B - \sin 2C = 4\cos A \cos B \cos C$
- OR**
- (b) (i) If $x = 1 + \log a^{bc}$; $y = 1 + \log b^{ca}$; and $z = 1 + \log c^{ab}$. Prove that $xyz = xy + yz + zx$.
 (ii) If $\tan 35^\circ + \cot 37^\circ + \tan 325^\circ = x \tan 53^\circ + \tan 127^\circ$ then find the value of x.
- 2 (a) (i) Find the derivative of $\sec x$ using first principle.
 (ii) If $f(x) = \begin{cases} 5x - 4; & 0 < x \leq 1 \\ 4x^2 + 3bx; & 1 < x < 2 \end{cases}$
 Is continuous at every point of its domain then find the value of b.
- OR**
- (b) (i) Find the maximum and minimum values of the polynomial $f(x) = x^3 - 3x^2 - 6x + 6$.
 (ii) If $u = e^{x/y} \sin\left(\frac{x}{y}\right) + e^{y/x} \cos\frac{y}{x}$ then show that $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} = 0$.
- 3 (a) (i) Evaluate $\int e^x \sqrt{1+e^x} dx$.
 (ii) Evaluate $\int \frac{\sin x + \cos x}{\sqrt{1 + \sin 2x}} dx$.
- OR**
- (b) (i) Evaluate $\int \frac{1}{4 + 5 \cos x} dx$.
 (ii) Evaluate $\int \frac{4x + 12}{4x^2 + 24x - 6} dx$
- 4 (a) (i) If $A = \begin{bmatrix} -8 & 5 \\ 2 & 4 \end{bmatrix}$ satisfies the equation $x^2 + 4x - p = 0$ then find 'P'.
 (ii) Solve the equation $2x + 4y + 5z = 18$; $2x - y + 8z = 13$ and $5x - 2y + 7z = 20$ by matrix inversion method.
- OR**
- (b) (i) Find the rank of the matrix $A = \begin{bmatrix} 1 & 2 & 3 & 4 \\ 0 & 2 & 3 & 4 \\ 2 & 4 & 6 & 8 \end{bmatrix}$.
 (ii) If $A = \begin{bmatrix} 0 & 1 \\ 2 & 3 \end{bmatrix}$, $B = \begin{bmatrix} -1 & 2 \\ 4 & 3 \end{bmatrix}$ and $C = \begin{bmatrix} 2 & -1 \\ 6 & 5 \end{bmatrix}$ then prove that $A(B + C) = AB + AC$.
- 5 (a) (i) Explain linear and non-linear graphs with examples.
 (ii) Find the equation of circle whose centre is (-1, 2) and the end of diameter is (4, 6).
- OR**
- (b) (i) What are the basic mathematical principles are used in Biological Testing.
 (ii) Find the equation of the line perpendicular to the line $2x + 3y - 5 = 0$ and passing through (3, -4).

FACULTY OF PHARMACY**B. Pharmacy I-Year (Main) Examination, April / May 2016****Subject : Biology****Time : 3 Hours****Max. Marks: 70****Note: Answer all questions. All questions carry equal marks.**

- 1 (a) Describe Meiosis with the help of a neat and well labeled diagram. (14)
- OR**
- (b) (i) Illustrate various types of Stem modifications with suitable examples. (7)
(ii) Describe morphology and histology of a leaf and draw a neat and will labeled diagram. (7)
- 2 (a) (i) Give the classification of Solanaceae and list out the economic importance of its members. (7)
(ii) Give the botanical names and their uses of any three medicinal plants from Leguminosae and Scrophulariaceae. (7)
- OR**
- (b) (i) Describe the vegetative and floral characteristics of Umbelliferae. (7)
(ii) List out any six medicinally important plants and their products from Rubiaceae. (7)
- 3 (a) (i) Describe respiration mechanism and its significance in plants. (7)
(ii) Write an essay on transpiration. (7)
- OR**
- (b) (i) Define Hybridization. Comment on its advantages and disadvantages. (7)
(ii) Define Photosynthesis. Explain its significance. (7)
- 4 (a) (i) List out differences and similarities between animal and plant cell. (7)
(ii) Describe the connective tissue and its role in animal kingdom. (7)
- OR**
- (b) (i) What are the hormones secreted by the pancreas? Give brief note on their clinical significance. (7)
(ii) Give the details of histology of Kidney. (7)
- 5 (a) (i) Describe the external morphology of Male and female of Ascaris. (7)
(ii) Mention about the symptoms, pathogenesis and clinical management of Malaria. (7)
- OR**
- (b) (i) Give the details of life cycle of Tape worm. (7)
(ii) Describe the life history of housefly. (7)

FACULTY OF PHARMACY**B. Pharmacy I-Year (Main) Examination, April 2016****Subject : Anatomy, Physiology and Health Education****Time : 3 Hours****Max. Marks: 70****Note: Answer all questions. All questions carry equal marks.**

- 1 (a) (i) Define tissue. Classify various types of connective tissues and explain any two with a neat labeled diagram. (8)
 (ii) Explain general principles of membrane permeability. (6)
OR
- (b) (i) Write a note on bone tissue. (8)
 (ii) Explain the following bones with a neat diagram. (6)
 (a) Sternum (b) Clavicle
- 2 (a) (i) Describe the structures and functions of brainstem. (8)
 (ii) Explain the following: (6)
 (a) Neuron (b) Ganglion (c) Synapse
OR
- (b) Define clot. Explain various pathways in the process of blood clotting. Write a note on role of Vitamin K in blood clotting. (14)
- 3 (a) (i) Discuss the importance of enzymes in the process of digestion. (8)
 (ii) Describe the histology of small intestine. (6)
OR
- (b) (i) Define Vital capacity. Discuss about neuronal regulation of respiration. (8)
 (ii) Discuss the disorders of pituitary gland. (6)
- 4 (a) (i) What is GFR? Explain various factors affecting GFR. (8)
 (ii) Explain the physiology of Smell. (6)
OR
- (b) (i) Explain in detail about the anatomy of Ear. (8)
 (ii) Write about structure and functions of taste buds. (6)
- 5 (a) (i) Describe signs, symptoms and different stages of inflammation. (8)
 (ii) Write about various intrauterine devices in family planning. (6)
OR
- (b) (i) Define Shock. Discuss different types of shock. (8)
 (ii) Write a note on edema and Embolism. (6)
