PHD10110

I Pharm. D (Regular) Examinations -September-2015

(Regulation 2010-11)

(Examination at the end of First year of 6 Years Course)

Paper-I: Human Anatomy and Physiology

Time : Three hours | Maximum Marks: 70

Answer any FIVE questions.
All questions carry equal marks.

1. Discuss about the mechanism of coagulation. Add a note on Hemophilia.

2. Describe the formation of urine. Add a note on acid base balance by the kidneys.

3. Describe the structure and functions of pituitary gland. Add a note on pancreatic hormones.

4. Write about
   a) Structure and functions of cerebral cortex
   b) Parasympathetic Nervous System

5. Discuss about
   a) Structure and functions of tests
   b) Menstrual cycle

6. Discuss about blood pressure regulation.

7. Explain about
   a) Muscular tissue
   b) Joints and their types

8. Discuss about
   a) Lymphatic system
   b) Digestion of food in small intestine

PHD10210

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Paper-II: Pharmaceutics

Time : Three hours | Maximum Marks: 70

Answer any Five Questions. All Questions carry equal marks

1. a) Define the following and explain their significance 6
   i) Displacement value
   ii) Proof spirit
   b) Calculate the quantity of sodium chloride required to be added to 60 ml of 1% pilocarpine hydrochloride to make it isotonic.
   Sodium chloride equivalent of pilocarpine hydrochloride = 0.22 4
   c) How do you dispense six suppositories each containing 0.2 grams of tannic acid with theobroma oil in 1 gram mould (displacement value of tannic acid is 1.6) 4

2. a) Differentiate between flocculated and deflocculated suspensions. Give the classification of suspending agents with suitable examples. 7
   b) Write about the tests of identifying the type of emulsion. 7

3. How do you prepare and dispense the following types of powders? 3 ½x4
   a) Explosive powders b) Eutectic powders
   c) Effervescent powders d) Powders containing potent drugs

4. a) Enumerate the formulation ingredients for monophasic dosage forms. 7
   b) Differentiate between lotions and liniments. Write the preparation of calamine lotion mentioning the use of each ingredient. 7

5. a) Write about different types of incompatibilities with suitable examples and methods for correcting the same. 10
   b) How do you dispense the following? 4
   Sodium salicylate 5 g
   Lemon syrup 20 ml
   Water upto 75m1

6. a) Describe the types extraction processes. Differentiate between maceration and percolation and mention their advantages with suitable examples. 8
   b) With the help of a suitable example explain the preparation of dry extract. 6

7. a) Write about the factors affecting the dose selection. 7
   b) What is a prescription? Write about different parts of prescription. 7

8. Write short notes on the following: 3 ½ x4
   a) Throat paints b) Surgical dressings
   c) Collodians d) Absorbable gelatin sponge

PHD10310

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Paper-III: Medicinal Biochemistry

Time : Three hours | Maximum Marks: 70

Answer any Five Questions. All Questions carry equal marks

1. Give an account of the role of cyclic AMP in biological processes. 14

2. What do you know of 2x7
   i) Isoenzymes
   ii) Enzyme action and Enzyme inhibition

3. Give an account of 2x7
   i) HMP Shunt
   ii) Gluconeogenesis

4. How do you carry out the following tests? 14
   i) HDL cholesterol
   ii) Urea and uric acid
   iii) Total cholesterol
   iv) Serum billirubin

5. Write briefly on 5+5+4
   i) Galactose tolerance test
   ii) Jaundice
   iii) Fatty liver

6. What do you know of 2x7
   i) DNA repair mechanism
   ii) ELISA

7. Write short notes on 2x7
   i) Catabolism of amino acids
   ii) Oxidative phosphorylation

8. Discuss the importance of biochemical role of 4+5+5
   i) Calcium
   ii) Chlorides
   iii) Potassium

PHD10410

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Paper-IV: Pharmaceutical Organic Chemistry

Time : Three hours | Maximum Marks: 70

Answer any Five Questions. All Questions carry equal marks

1. a) Explain the order of stability of carbanions 5
   b) Add a note on the intermolecular forces 4
   c) Write the mechanism of free radical substitution 5

2. Explain with a suitable example, the salient features of a SN^2 reaction. Discuss the evidence in favour of this reaction.

3. Write short notes on 6+4+4
   a) Bayer's strain theory b) Kolbe reaction c) Conjugated dienes

4. Give an account of 7+7
   a) Activating and deactivating O, P, m – directing groups
   b) Nucleophilic acyl substitution

5. Explain with examples the uses of sodium borohydride and Lithium aluminium tetrahydride in organic synthesis. 7+7

6. Explain the mechanism of 5+4+5
   a) Reformatsky reaction b) Wittig reaction c) Michael addition

7. Write the method of preparation and uses of 7x2
   a) Mephenesin b) Saccharin sodium c) Urea
   d) Sodium lauryl sulphate e) Lactic acid f) Citric acid
   g) Ethylbenzoate

8. Write briefly on: 5+5+4
   a) Cyclo addition reactions b) E2 versus E1 c) Hyperconjugation

PHD10510

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(Examination at the end of First year of 6 Years Course)

Paper-V: Pharmaceutical Inorganic Chemistry

Time : Three hours | Maximum Marks: 70

Answer any Five Questions. All Questions carry equal marks

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

2. What are redox titrations? Explain the principle and procedure involved in the assay of any two compounds.

3. What do you know of 2x7
   a) Electrolyte replenishers
   b) Precipitation titrations

4. Give an account of the theory of indicators used in acid-base titrations.

5. Write the method of preparation, tests for purity and assay of 4x3½
   a) Zinc Oxide b) Boric acid
   c) Ammonium chloride d) Magnesium sulphate

6. Write short notes on: 2x7
   a) Antacids b) Errors in analysis

7. What are dental products? Classify them with examples. Write the method of preparation, tests for purity and assay of any two.

8. Give an account of 2x7
   a) Radio pharmaceuticals b) Pharmaceutical aids

PHD106A10

I Pharm. D (Regular) Examinations -September-2015

(Regulation 2010-11)

(Examination at the end of First year of 6 Years Course)

Paper-VIA: Remedial Mathematics

Time : Three hours | Maximum Marks: 70

Answer any FIVE questions. All questions carry equal marks.

1. a) Evaluate the value of the determinant
$$\begin{vmatrix} (b+c)^2 & a^2 & a^2 \\ b^2 & (c+a)^2 & b^2 \\ c^2 & c^2 & (a+b)^2 \end{vmatrix}$$
b) solve the system of equations by Cramer's rule
$x + y - 2z = 3,\quad 2x - 5y + 4z = -4,\quad 4x - y + 3z = 5$

2. a) If A+B=45^0, prove that (1+tanA)(1+tanB)=2 and hence deduce that tan $\left(22\frac{1}{2}\right)^0 = \sqrt{2}$-1
b) In ΔABC, if $\frac{SinA}{4} = \frac{SinB}{5} = \frac{SinC}{6}$, then find the value of COSA+COSB+COSC

3. a) Find the equations of the lines perpendicular to the line $12x - 5y + 5 = 0$ and at a distance of 2 units from the point (-2,3)
b) Find the equation of the parabola whose focus is (2,4) and the tangent at the vertex is $2x + y - 3 = 0$

4. a) State Euler's theorem and verify it for the function $u = Sin^{-1}\left(\frac{x}{y}\right) + tan^{-1}\left(\frac{y}{x}\right)$
b) Evaluate $\lim_{x\to 1}\left(\frac{\sqrt{3+x}-\sqrt{5-x}}{x^2-1}\right)$

5. a) Evaluate $\int \frac{2x}{x^2+3x+2}dx$
b) If $y = x^x e^x + x^{1/x} + Sin(x^2)$ then find $\frac{dy}{dx}$.

6. a) Find the value of $\int_0^{\pi} \frac{dx}{5+3cosx}$
b) Solve the differential equation $(1+x^2)dy + 2xydx = cotxdx$

7. a) Find the Laplace transform of t^2cosat
b) Find the Laplace transform of te^{-t}cosh –t

PHD106B10

I Pharm. D (Regular) Examinations -September-2015

(Regulation 2010-11)

(Examination at the end of First year of 6 Years Course)

Paper-VIB: Remedial Biology

Time : Three hours | Maximum Marks: 70

Answer any **FIVE** questions. All questions carry equal marks

1. Draw a neat labeled diagram of plant cell. Describe the functions of each part.
2. Explain about the various types of animal tissues.
3. Describe the structure and reproductive methods in Fungi.
4. Explain in detail about Pisces.
5. Describe the different types of stem modifications with suitable examples.
6. Explain the various methods of Pollination with suitable examples.
7. Describe about the morphology of plants.
8. Explain the central nervous system of frog.

1102

B.Pharmacy (II Semester)/Pharm D (I year) Examinations - September,2015

(Regulation 2012-13)

Regular / Supplementary

Paper-: Human Values and Professional Ethics

Time : One and Half hour Maximum Marks: 50

Answer all questions

1. Distinguish between the needs of the self and needs of the body.
   (or)
   What do you mean by ethics? Explain a few ways to practice ethics in pharmacy profession.

2. How will you evaluate a technology holistically?
   (or)
   Give an account of the root causes of unethical practices.

3. What should be the content of value education to make it complete? Discuss with examples.
   (or)
   Explain with a diagram the different between animal and human consciousness.

4. What is the basis mutual happiness in human relationship? How does it lead to undivided society?
   (or)
   Explain the process of self exploration with an example.

5. Describe the comprehensive goals in the human society.
   (or)
   Discuss the naturally acceptable in feeling human-human relationships.
