

(PHD10110)

I PHARM. D. DEGREE EXAMINATION, JULY 2018.

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

Paper I — HUMAN ANATOMY AND PHYSIOLOGY

(Regulation 2010-11)

Time : Three hours

Maximum : 70 marks

Answer any FIVE questions.

All questions carry equal marks.

1. Explain the following :
 - (a) Structure and functions of the skin
 - (b) Blood grouping system used in humans
2. Describe the following :
 - (a) Classification and functions of epithelial tissue
 - (b) Formation of haemoglobin
3. Discuss about the mechanism of blood coagulation.
Add a note on disorders of coagulation.

4. Describe the following :
 - (a) Structure and functions of a cell
 - (b) Transport of respiratory gases.
5. Explain the digestion and absorption of carbohydrates and fats.
6. Describe the anatomy and functions of heart.
7. Explain the structure of adrenal gland, hormones and their functions in the human body.
8. Classify nervous system and explain in detail sympathetic nervous system.

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www.kvrssgroup.com Paper II — PHARMACEUTICS
(Regulation 2010–2011)

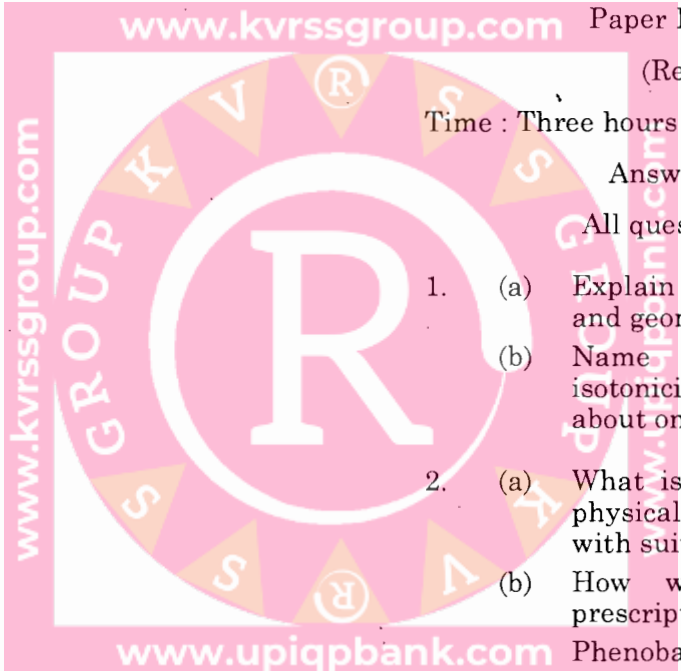
Time : Three hours Maximum : 70 marks

Answer any FIVE questions.
All questions carry equal marks.

1. (a) Explain the principle of method of alligation and geometric dilution. (6)
(b) Name the methods for adjustment of isotonicity with their advantages and write about one method in detail. (8)

2. (a) What is an incompatibility? Discuss about physical and therapeutic incompatibilities with suitable examples. (10)
(b) How will you dispense the following prescription? (4)

Phenobarbitone sodium 600 mg
Ammonium bromide 8 mg
Water up to 100 ml
Make a mixture. Label: two teaspoons to be taken at night.



3. (a) Give the classification of suppository bases and discuss their advantages and disadvantages with suitable examples. (9)
- (b) Define displacement value. How do you dispense six suppositories each containing 120 mg of boric acid with cocoa butter as base using 1 g mould (displacement value of boric acid is 1.5). (5)
4. (a) What are suspensions? Write about the formulation additives of suspensions. (7)
- (b) What are the instability conditions of emulsions? What are the causes and suggest methods for stabilizing emulsions? (7)
5. (a) What are the salient differences between lotions and liniments? Name the ingredients of calamine lotion with their uses and explain the principle of its preparation. (7)
- (b) Briefly write about the development of pharmacy profession in India. What are the career opportunities for pharmacy graduates in India? (7)
6. Write short notes on the following : www.upiqpbank.com
- (a) Percolation (5)
- (b) Absorbable gelatin sponge (5)
- (c) Medicated bandages. (4)
7. (a) Calculate the dose of a drug for 6 year old child if the adult dose of the drug is 120 mg. (3)
- (b) How do you prepare 1000 grams of dilute acetic acid (6% w/w) from 33% w/w acetic acid? (3)
- (c) How will you dispense 10 hard gelatin capsules each containing 300 µg of hyoscine hydrobromide? Minimum content for a capsule is 100 mg. (4)
- (d) How much sodium chloride is required to render 100 ml of a 1% solution of apomorphine hydrochloride isotonic with blood serum? A 1% solution of apomorphine hydrochloride has a freezing point lowering of 0.08° C. (4)
8. How the following are prepared and dispensed?
- (a) Colloids (5)
- (b) Dusting powders (4)
- (c) Explosive powders. (5)

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Paper III — MEDICINAL BIOCHEMISTRY

(Regulation 2010-2011)

Time : Three hours

Maximum : 70 marks

Answer any FIVE questions.

All questions carry equal marks.

1. Write in detail on : (8 + 6 = 14)
 - (a) Cell membrane
 - (b) Nucleus.
2. With a neat sketch explain the biochemical processes involved in electron transport chain and their significance.
3. Write short notes on : (8 + 6 = 14)
 - (a) Mechanisms involved in Glucose homeostasis
 - (b) Gluconeogenesis.

4. Write in detail on the mechanisms involved in the amino acid metabolism. With a neat scheme outline the metabolism of phenylalanine and write its biological significance.
5. Write the principle, procedure and clinical significance of
 - (a) Glucose tolerance test
 - (b) Creatinine clearance test. (5 + 5 + 4 = 14)
6. Write reasons for the following : (5 + 5 + 4 = 14)
 - (a) 1 mole of Palmitic acid gives more energy than 1 mole of glucose
 - (b) Cholesterol is highly essential for our body
 - (c) Plasma protein content is a good indicator of liver health.
7. Write in detail on : (7 + 7 = 14)
 - (a) Body water
 - (b) Chlorides in body fluids
8. Discuss the following : (5 + 4 + 5 = 14)
 - (a) Gene Mutation
 - (b) Atherosclerosis
 - (c) Isozymes.

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I Pharm D DEGREE EXAMINATION,
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Paper IV — PHARMACEUTICAL ORGANIC
CHEMISTRY

(Regulation 2010-11)

Time : Three hours

Maximum : 70 marks

Answer any FIVE questions.

All questions carry equal marks.

1. Write the method of preparation, test for purity, assay and medicinal uses of
- (a) Saccharin
 - (b) Chlorbutol
 - (c) Dimercaprol
 - (d) Citric acid.
- (4 × 3.5 = 14)
2. Write the mechanism, reaction conditions and synthetic applications of
- (a) Benzoin condensation
 - (b) Reimer tieman's reaction.
- (7 + 7 = 14)
3. Discuss the following : (5 + 5 + 4 = 14)
- (a) Hydrogen bonding
 - (b) Aprotic solvents
 - (c) Geometric isomerism.
4. Write in detail on the following with respect to substitution reactions (7 + 7 = 14)
- (a) Stability of Carbocation
 - (b) Factors effecting stereochemistry.
5. Write short notes on (7 + 7 = 14)
- (a) Cyclo addition reactions
 - (b) 1,4-addition reaction.
6. Write reasons for the following (5 + 4 + 5 = 14)
- (a) Aniline decolorizes bromine water but benzene doesnot.
 - (b) Carbocations attain a flat geometry
 - (c) Friedal crafts reaction need moisture-free reaction conditions.
7. Write in brief on : (7 + 7 = 14)
- (a) Hoffman rearrangement
 - (b) Reformatsky reaction.
8. What are carboxylic acids? Give examples. Write in detail on factors effecting acidity of carboxylic acids. Add a note on reactions of carboxylic acids.

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I Pharm D DEGREE EXAMINATION, JULY 2018.

(Examination at the end of First Year of 6 years course)

PHARMACEUTICAL INORGANIC CHEMISTRY

(Regulation 2010-2011)

Time : Three hours

Maximum : 70 marks

Answer any FIVE questions.

All questions carry equal marks.

1. What are expectorants? Classify them. Write a detailed note on preparation, assay and uses of ammonium chloride and potassium iodide. (14)
2. Write briefly on
(a) Zinc sulfate
(b) Sodium nitrite
(c) Light kaolin.

(5 + 4 + 5 = 14)

3. Define antiseptics and explain their significance in pharmacy. Write in detail on method of preparation, assay and uses of hydrogen peroxide solution and povidone-iodine solution. (14)
4. (a) What are astringents? Write in detail on any one product in this category. (9)
(b) Explain the clinical significance of emetics with an example. (5)
5. Write in detail on the role of dentifrices in the maintenance of dental health. Give a detailed account on sodium fluoride and calcium carbonate.
6. Write short note on (7 + 7 = 14)
(a) Mouth Wash
(b) Dental Fillers
7. What are surgical aids? Classify them. Write a detailed note on the preparation and applications of Plaster of Paris. (14)
8. Write in detail on (7 + 7 = 14)
(a) Barium chloride
(b) Cis-platin.

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I. Pharm. D DEGREE EXAMINATION, JULY 2018.

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

Paper VIA : REMEDIAL MATHEMATICS

(Regulation 2010–11)

Time : Three hours

Maximum : 70 marks

Answer any FIVE questions.

All questions carry equal marks.

1. (a) If $A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & -2 & 1 \\ +4 & 2 & 1 \end{bmatrix}$ Then show that

$$A^3 - 23A - 40I = 0.$$

(b) Show that $\begin{bmatrix} 5 & -1 \\ 6 & 7 \end{bmatrix} \begin{bmatrix} 2 & 1 \\ 3 & 4 \end{bmatrix} \neq \begin{bmatrix} 2 & 1 \\ 3 & 4 \end{bmatrix} \begin{bmatrix} 5 & -1 \\ 6 & 7 \end{bmatrix}$.

2. (a) Find the equation of the tangent and normal to the given curve $y = x^3$ at $(1, 1)$.

(b) Find the equation of all lines having slope 'O' which are tangent to the curve $y = \frac{1}{x^2 - 2x3}$.

3. (a) Prove that $\tan^{-1} x + \tan^{-1} \frac{2x}{1-x^2} =$

$$\tan^{-1} \left(\frac{3x-x^3}{1-3x^2} \right), |x| < \frac{1}{\sqrt{3}}.$$

(b) Find the value of $\cot(\tan^{-1} a + \cot^{-1} a)$.

4. (a) Prove that $\int \operatorname{Sec} x dx = \log | \operatorname{Sec} x + \tan x | + C$.

(b) Find the Integration of $\frac{(x+1)(x+\log x)^2}{x}$.

5. (a) Find the laplace transforms of $t \operatorname{sech} at$.

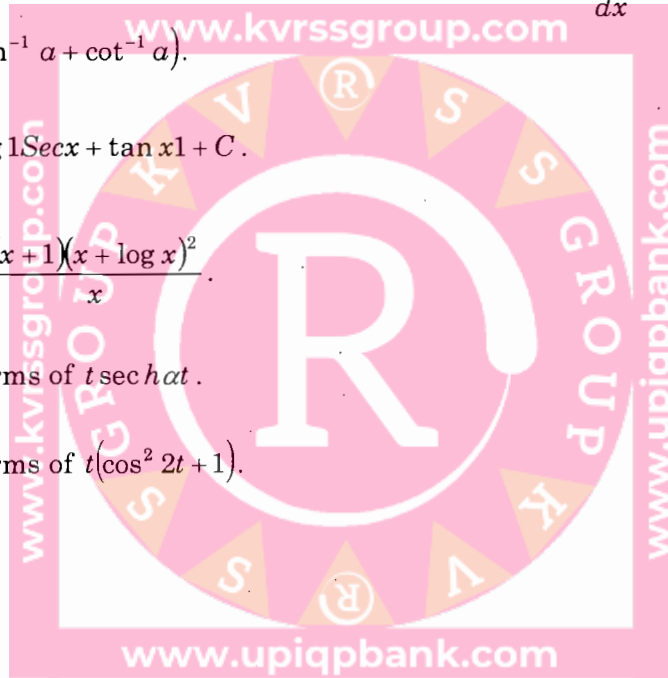
(b) Find the laplace transforms of $t(\cos^2 2t + 1)$.

6. (a) Evaluate $\int \frac{1}{1+\sec^2 x} dx$.

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

7. (a) Solve the differential equation $((\tan^{-1} y - x) dy = (1 + y^2) dx)$.

(b) Find the general solution of $x \frac{dy}{dx} + 2y = x^2 \log x$.



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I Pharm.D. DEGREE EXAMINATIONS, JULY 2018.

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Paper VI B — REMEDIAL BIOLOGY

(Regulation 2010-11)

Time : Three hours

Maximum : 70 marks

Answer any FIVE questions.

All questions carry equal marks.

1. Classify the fruits and write in detail about the dehiscent capsular fruits with examples.
2. Describe the structure and functions of various animal tissues.
3. Describe the isolation of bacteria and explain the stains and types of staining.
4. Explain the morphological characters of aerial parts of plants and write the types, functions and uses of roots.
5. Describe the various components of an animal cell with a neat and labelled diagram.
6. Define plant taxonomy and discuss in detail morphological characters of Umbelliferous fruits.
7. Write a detail note on digestive system of frog with neat labelled diagram.
8. What is growth? What are the factors responsible for promoting the growth of plants?

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B. Pharmacy/Pharm. D DEGREE EXAMINATION,
JULY 2018.

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

HUMAN VALUES AND PROFESSIONAL ETHICS

(Regulation 2012-13)

Time : One and half hour

Maximum : 50 marks

Answer ALL questions.

1. What do you understand by value education? Why is it required?

Or

2. What are basic human aspirations? Give some examples.

3. "It is very difficult to fulfil basic human aspirations". Discuss the statement.

Or

4. Suggest a suitable programme to fulfil basic human aspirations.

5. What is meant by harmony in self? Explain with examples.

Or

6. Suggest some measures to ensure harmony in the family.

7. What factors are responsible to improve ethical human conduct?

Or

8. What do you understand by professional ethics? Suggest measures to follow professional ethics.

9. What is meant by vision? Suggest a suitable vision for holistic technologies.

Or

10. Discuss how self exploration is responsible for improving value education.