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I Year Supplementary Examination, May 2017

BACHELOR of PHARMACY

Pharmaceutics - I
(Dispensing and Community Pharmacy)
(BPH - 01)

Time : Three Hours *Maximum Marks : 80*

(Write your Roll No. at the top immediately on receipt of this question paper.)

- *No student is allowed to leave the Hall before Two hours.*
- *Answer any FIVE questions.*
- *All questions carry equal marks.*

1. a) What is Prescription ? Discuss its various parts.

   b) Give two examples each of chemical and physical incompatibilities. (8 + 8 = 16)

2. How will you prepare a flocculated suspension ? Discuss the evaluation parameters of this type of suspension dosage form. (16)

3. a) Write the method of preparation of throat paints with suitable example.

P.T.O.

b) Discuss the preparation of ointment dosage form by fusion. (8 + 8 = 16)

4. a) Give the merits and demerits of suppositories.

b) Write a note on deodorants and antiperspirants. (8 + 8 = 16)

5. a) Discuss the tests for strility on liquid parentral dosage form in brief.

b) Discuss the storage of ophthalmic formulation. (8 + 8 = 16)

6. Write notes on :

a) Patient medication record keeping

b) Role of Pharmacist in community health care and health education. (8 + 8 = 16)

7. Write short notes on the following : (4 × 4 = 16)

a) Types of powders

b) Cachets and Tablet triturates

c) Stablizers and Odorants in liquid dosage forms

d) Lotions and Liniments.

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I Year Supplementary Examination – May 2017

BACHELOR of PHARMACY

Pharmaceutical Chemistry

(BPH - 02)

Time : Three Hours *Maximum Marks : 80*

(Write your Roll No. at the top immediately on receipt of this question paper.)

- *No student is allowed to leave the Hall before Two hours.*
- *Answer any FIVE questions.*
- *All questions carry equal marks.*

1. a) What do you understand by the term pharmaceutical aids ? Write down their significance and applications. (8)

   b) Write down the method of preparation identification, assay and uses of boric acid. (8)

2. Describe the following with suitable examples (any *four*) : (4 × 4 = 16)

   a) Acidifiers

   b) Antacids

P.T.O.

c) Protectives

d) Saline cathartics

e) Buffers

3. a) What are the various sources of pharmaceutical impurities ? What are the various ways to minimize them ? (8)

b) Describe the limit tests for chlorides and sulphates. (8)

4. a) What do you understand by trace and essential elements ? How they are significant to us ? (8)

b) What are Haematinics ? Write down the identification tests and assay of ferrous Gluconate. (8)

5. Describe the following (any *four*) : (4 × 4 = 16)

a) Antimicrobials

b) Astringents

c) Inhalants

d) Respiratory stimulants

e) Anticaries agents

6. a) What do you understand by the term inorganic radiopharmaceuticals ? What are its various applications ? (8)

b) Describe the assay of barium sulphate along with its uses. (8)

7. a) What are major intracellular and extracellular electrolytes ? Describe the composition of ORS. (8)

b) Write down the method of preparation, assay and uses of sodium chloride and calcium gluconate. (8)

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I Year Supplementary Examination, May 2017

BACHELOR of PHARMACY

Pharmaceutical Chemistry - II

(Physical Chemistry)

(BPH - 03)

Time : Three Hours *Maximum Marks : 80*

(Write your Roll No. at the top immediately on receipt of this question paper.)

- *No student is allowed to leave the Hall before Two hours.*
- *Answer any FIVE questions.*
- *All questions carry equal marks.*

1. a) Give a descriptive note on Le-Chatelier's principle.

   b) Explain reversible and irreversible reactions with suitable examples. (2 × 8 = 16)

2. a) State first and second law of thermodynamics with example.

P.T.O.

b) Write a detailed note on free energy functions and its applications. (2 × 8 = 16)

3. a) Discuss theory of reaction kinetics.

b) Describe rate rate determining step, order of reaction and molecularity of chemical reaction with examples. (2 × 8 = 16)

4. a) Explain Arrhenious theory of electrolytic solutions.

b) Describe ionisation of acids and bases. (2 × 8 = 16)

5. a) Write on colligative properties of non-electrolytic solution.

b) What are ideal and real solutions ? Explain with suitable examples. (2 × 8 = 16)

6. a) Explain the behaviour of gases. What do you understand by critical phenomena ?

b) Explain various methods of crystal analysis with examples. (2 × 8 = 16)

7. Write notes on : (any *four*) (4 × 4 = 16)

a) Molar refraction and Molar volume

b) Nernst equation

c) Roult's law

d) Law of distribution

e) Catalysis

f) Debye Hulekel theory

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I Year Supplementary Examination – May 2017

BACHELOR of PHARMACY

Organic Chemistry - I

(BPH - 05)

Time : Three Hours *Maximum Marks : 80*

(Write your Roll No. at the top immediately on receipt of this question paper.)

- *No student is allowed to leave the Hall before Two hours.*
- *Answer any FIVE questions.*
- *All questions carry equal marks.*

1. Write short notes on any *four* : (4 × 4 = 16)
   a) Peroxide effect
   b) SN_1 and SN_2 reactions
   c) E_1 and E_2 reactions
   d) Bond Dissociation Energy
   e) Enantiomers

2. Discuss any *four* of the following : (4 × 4 = 16)
   a) Applications of Grignard reagent
   b) Energy of Activation

P.T.O.

c) Role of transition metals as catalyst

d) Polarimetry

e) Ozonolysis

3. Explain the following reactions (any *four*) : (4 × 4 = 16)

a) Aldol condensation

b) Cannizaro reaction

c) Meerwein – Poundorf – Varley reaction

d) Claisen condensation

e) Wolff-kishner reaction

4. a) Describe, why transition metal complexes are used as catalysts ? (8)

b) Write down the various methods of preparation of alkanes. Describe the preparation, physico-chemical properties of ethane. (8)

5. Differentiate between (any *four*) : (4 × 4 = 16)

a) Axial and Equitorial bonds

b) Enantiomers and Diastereomers

c) Aldehydes and Ketones

d) Carbocations and Carbanions

e) Bond energy and Bond dissociation energy.

6. a) Write down the methods of preparation, reactions and uses of carboxylic acids. (8)

b) Write down the various methods of resolution of Recemic mixtures. (8)

7. a) Write down the methods of preparation, reactions and uses of alkyl halides. (8)

b) Describe (any *two*) : (4 × 2 = 8)

i) Nucleophilic addition reaction

ii) Nucleophilic acyl substitution

iii) Free radical substitution.

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I Year Supplementary Examination – May 2017

BACHELOR of PHARMACY

Mathematics

(BPH - 08)

Time : Three Hours *Maximum Marks : 80*

(Write your Roll No. at the top immediately on receipt of this question paper.)

- *No student is allowed to leave the Hall before Two hours.*
- *Answer any FIVE questions.*
- *All questions carry equal marks.*
- *Use of simple calculator is allowed.*

1. a) Evaluate $\lim_{x \to 2} \frac{\sqrt{x+7} - 3}{x-2}$. (6)

b) Differentiate the following w.r. to x : (10)

i) $\tan^{-1}\left(\frac{y}{x}\right) = \log\sqrt{x^2 + y^2}$

ii) $y = \frac{x + e^x}{1 + \log x}$

P.T.O.

2. Integrate the following : (16)

i) $\int\left(x-\frac{1}{x}\right)^3 dx$

ii) $\int \frac{\sin x}{1+\sin x}\, dx$

iii) $\int x^2 e^{2x}\, dx$

iv) $\int_0^{\pi/2} \tan^2 x\, dx$

3. Solve the differential equations : (16)

i) $\frac{dy}{dx}=\frac{xy}{x^2+y^2}$

ii) $\left(D^2+4\right)y=\cos 2x$

4. a) Find the Laplace transform of $t^2 \cos at$. (5)

b) Find the Inverse Laplace transform of $\frac{1}{s(s^2+a^2)}$. (5)

c) Find the IInd order derivative of $\log(ax+b)$. (6)

5. a) Represent the following data by less than ogive : (8)

Age (yrs)	10-20	20-30	30-40	40-50	50-60
No. of Patients	10	37	65	80	51

b) Define measures of central tendency. What are the characteristics of a good measure of central tendency ? (8)

6. a) Calculate the coefficient of variation from the following data : (8)

Class interval	101-105	106-110	111-115	116-120	121-125
Frequency	6	22	40	25	7

b) Explain any *two* of the following terms : (8)

i) F-test

ii) ANOVA

iii) Binomial distribution.

7. a) Calculate rank correlation from the data : (10)

X : 78 89 97 69 59 79 68 57

Y : 125 135 156 112 107 136 123 108

b) State Baye's theorem. (6)

8. Fit a straight line of Y on X from the data : (16)

X	:	0	1	2	3	4	5	6
Y	:	2	1	3	2	4	3	5