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Roll No.									
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Date									
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Signature of Candidate _____

Signature of Invigilator _____

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Writing anything except Roll Number on question paper will be deemed as an act of indulging in unfair means and action shall be taken as per rules.

Winter Examination 2018
BPharm Semester I
BP101T – HUMAN ANATOMY & PHYSIOLOGY I
Section A

Time- **30 Min.**

Marks Obtained _____

Maximum Marks- **20**

Signature of Examiner _____

Section A: Objective Type (either True/ False or Match the following or Fill in the blank)			Ans.	Marks
1	State True or False		2x3	
	(i)	Atlas is the 2 nd cervical vertebrae.	[]	
	(ii)	Rods are very sensitive for dim light.	[]	
	(iii)	Body temperature is controlled by positive feedback mechanism of homeostasis.	[]	
	Match the following		2x4	
	(iv)	Dopamine	(a)	Vitamin A
	(v)	Mast cell	(b)	Macrophage
	(vi)	Night blindness	(c)	Neurotransmitter
	(vii)	Phagocytosis	(d)	Histamine
	(iv)	_____	(v)	_____
			(vi)	_____
			(vii)	_____
	Fill in the blank		2x3	
	(viii)	Adduction is the movement toward _____ of body.	_____	
	(ix)	Lacteals are _____ present in small intestine.	_____	
	(x)	Sebaceous glands are composed of _____ cell.	_____	

Winter Examination 2018

B. Pharm Semester I

Paper: BP101T

Subject: Human Anatomy and Physiology I

Note: (1) Section B consists of 3 Long Answer Type Questions of 10 marks each.

Attempt **any two questions** from this Section.

(2) Section C consists of 9 Short Answer Type Questions of 5 marks each.

Attempt **any seven questions** from this Section.

Section B & C

Time- Two and Half Hours

Maximum Marks- 55 (Section B: 20 marks; Section C: 35 marks)

Section B: Long Answer Type; Attempt <u>any two</u> questions from this Section.		
2.	Define tissue. Classify and explain the connective tissue.	10
3.	Draw a well labelled diagram of Ear and explain physiology of hearing.	10
4.	Draw a neat diagram of Heart. Write the function of each part.	10
Section C: Short Answer Type; Attempt <u>any seven</u> questions from this Section.		
5.	Explain the process of cell division.	5
6.	Write a short note on Nervous tissue.	5
7.	Describe the function of Skin.	5
8.	Define homeostasis and discuss in brief about the homeostasis mechanisms.	5
9.	Classify the joints with example of each class.	5
10.	Discuss ABO system and Rh factor of blood group.	5
11.	Discuss the structure and function of Lymph node.	5
12.	Write a short note on Cardiac cycle.	5
13.	Discuss physiology of Smell.	5

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Winter Examination 2018
BPharm Semester I
BP102T – Pharmaceutical Analysis I
Section A

Time- **30 Min.**

Marks Obtained _____

Maximum Marks- **20**

Signature of Examiner _____

Section A: MCQ Type; Attempt <i>all</i> the questions from this Section.								1X20
							Ans.	Marks
1.	Write the the correct option in the space provided							
(i)	Indicator use in Volhards method							
	(a)	Ferrious nitrate	(b)	Chromate	(c)	Ferric Nitrate	(d)	Fluorescein
(ii)	Non aqueous titration is the titration of							
	(a)	SA and SB	(b)	WA and SB	(c)	WA and WB	(d)	SA and WB
(iii)	Edition of Indian Pharmacopoeia 2018 is							
	(a)	7	(b)	6	(c)	9	(d)	8
(iv)	Suitable indicator use for SA and SB titration is							
	(a)	Thymol Blue	(b)	Methyl red	(c)	Methyl Orange	(d)	Phenol Red
(v)	Litmus is used to test either substance is							
	(a)	acidic or alkaline	(b)	aqueous or pure liquid	(c)	moist gas or dry gas	(d)	semi-solid or solid
(vi)	Phenolphthalein changes color in							
	(a)	Acids	(b)	Alkalis	(c)	Water	(d)	Salt solutions
(vii)	A standard solution always contains							
	(a)	a known concentration of solute	(b)	an acid	(c)	a base	(d)	a primary standard
(viii)	When titrating a strong acid with a strong base, the equivalence point							
	(a)	will be below a pH of 7.0	(b)	will be above a pH of 7.0	(c)	will be at a pH of 7.0	(d)	will be either at above or below a pH of 7.0

(ix)	Dependence of value of the electrode potential on different factors is expressed by equation of:								
	(a)	Nernst	(b)	Arrhenius	(c)	Hess	(d)	Gibbs	
(x)	Conductance cells for conductivity measurements can be made from one of the following metal								
	(a)	Potassium	(b)	Sodium	(c)	Platinum	(d)	Stainless Steel	
(xi)	Silver-silver chloride reference electrode is made up of								
	(a)	copper wire coated with copper chloride	(b)	Sodium wire coated with sod. chloride	(c)	Mercury with calomel	(d)	Silver wire coated with silver chloride	
(xii)	Erichrome black T is used as indicator in which type of titration?								
	(a)	Neutralization	(b)	Precipitation	(c)	Redox	(d)	Complexometric	
(xiii)	Polarography apparatus reference electrode is use								
	(a)	DME	(b)	Saturated calomel electrode	(c)	Hydrogen Electrode	(d)	Ag/AgCl Electrode	
(xiv)	Lewis theory is related to								
	(a)	Conductometric titrations	(b)	Diazotization titration	(c)	Polarography	(d)	Non of these	
(xv)	Sulpha drugs are assayed by diazotization method, the titrant is used								
	(a)	Sodium nitrate	(b)	Sodium nitrite	(c)	Silver nitrite	(d)	Silver nitrate	
(xvi)	Platinum foil is coated with platinum black in which type of electrode?								
	(a)	Hydrogen	(b)	Glass	(c)	Mercury	(d)	Silver	
(xvii)	What will be the unit of molar conductivity?								
	(a)	mho	(b)	$\Omega\text{-cm}^{-1}$	(c)	$\Omega\text{-cm}^2\text{mol}^{-1}$	(d)	$\Omega\text{-cm}$	
(xviii)	Oxidation involves								
	(a)	loss of hydrogen	(b)	loss of oxygen	(c)	gain in hydrogen	(d)	gain in electrons	
(xix)	Co precipitation is related with								
	(a)	Surface adsorption	(b)	Occulusion	(c)	Mixed crystal formation	(d)	All	
(xx)	Calomel is								
	(a)	H_4Cl_2	(b)	Hg_2Cl_2	(c)	HCl	(d)	HNO_3	

Winter Examination 2018

BPharm Semester I

Paper: BP102T

Subject: Pharmaceutical Analysis I

Note: (1) Section B consists of 3 Long Answer Type Questions of 10 marks each.

Attempt ***any two questions*** from this Section.

(2) Section C consists of 9 Short Answer Type Questions of 5 marks each.

Attempt **any seven questions** from this Section.

Section B & C

Time- **Two and Half Hours**

Maximum Marks- **55 (Section B: 20 marks; Section C: 35 marks)**

Section B: Long Answer Type; Attempt <u>any two</u> questions from this Section.		
2.	Write the principle of precipitation titration. Explain different methods of end point determination in precipitation titration.	10
3.	Write principal involve in Potentiometry titration. Explain construction and working of Potentiometer.	10
4.	Write theory involve in acid and base. Explain the classification of acid and base titrations.	10
Section C: Short Answer Type; Attempt <u>any seven</u> questions from this Section.		
5.	Write short note on error.	5
6.	What do you mean masking and demasking ?	5
7.	Write the steps involve in Gravimetric analysis.	5
8.	Write short note on diazotization.	5
9.	Write short note on Iodometric titration.	5
10.	Write short note on DME.	5
11.	Write preparation and standardisation of Hydrochloric acid.	5
12.	Write different techniques of analysis.	5
13.	Why water is not used in non aqueous titration? Explain.	5

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Winter Examination 2018 (MAIN/ATKT)
BPharm Semester I
BP103T - PHARMACEUTICS- I

Section A

Time- **Half Hour**

Maximum Marks- **20**

Marks Obtained _____

Signature of Examiner _____

Section A: Objective Type (either True/ False or Match the following or Fill in the blank)				Ans.	Marks
1	State True or False			2x3	
	(i)	Throat paints are viscous liquid preparations used for mouth and throat infections.		[]	
	(ii)	In flocculated suspension the sediment is difficult to redisperse.		[]	
	(iii)	Eutectic mixtures are the mixtures which have ingredients with high melting point.		[]	
	Match the following			2x4	
	(iv)	HLB Scale	(a)	Posology	
	(v)	Linctus	(b)	Classification of surfactants	
	(vi)	Dose calculation	(c)	Interfacial tension	
	(vii)	Wetting agents	(d)	Viscous liquid preparation meant for the relief of cough	
		(iv) _____	(v) _____	(vi) _____	(vii) _____
	Fill in the blank			2x3	
	(viii)	One tea spoon full equals to..... fluid dracham and ml		_____	
	(ix)	Simple syrup is a _____ solution of _____ in water having concentration of 66.7%w/w.		_____	
	(x)	Second edition of Indian Pharmacopoeia was published in year _____ & Fifth edition of Indian Pharmacopoeia was published in year _____.		_____	

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Subject: Pharmaceutics - I

- Note: (1) Section B consists of 3 Long Answer Type Questions of 10 marks each.
Attempt **any two questions** from this Section.
- (2) Section C consists of 9 Short Answer Type Questions of 5 marks each.
Attempt **any seven questions** from this Section.

Section B& C

Time- **Two and Half Hours**
C: 35 marks)

Maximum Marks- **55 (Section B: 20 marks; Section**

Section B: Long Answer Type; Attempt <u>any two</u> questions from this Section.		
2.	Define suppository and explain the methods of preparation of suppository with calculation of Displacement Value	10
3.	Discuss in detail about the Emulsions stability problems and methods to overcome.	10
4.	Define and classify the various incompatibilities, discuss in detail about therapeutic incompatibility	10
Section C: Short Answer Type; Attempt <u>any seven</u> questions from this Section.		
5.	Write various formulas for dose calculation for children.	5
6.	Write brief note on Indian Pharmacopoeia.	5
7.	Define prescription and enumerate the various parts of it with suitable example.	5
8.	Classify various dosage forms with examples.	5
9.	Explain geometric dilution with suitable example.	5
10.	Write a note on HLB scale.	5
11.	Explain in brief about the various problems and their remedy occurs during handling of powders.	5
12.	Write method of preparation of Ointment	5
13.	Calculate the quantity of 80%, 60%, 40% v/v alcohol required to make 50 % v/v alcohol (600 ml).	5

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Winter Examination 2018 (MAIN/ATKT)
BPharm Semester I
BP104T - PHARMACEUTICAL INORGANIC CHEMISTRY

Section A

Time- **Half Hour**

Maximum Marks- **20**

Marks Obtained _____

Signature of Examiner _____

Section A: Objective Type (either True/ False or Match the following or Fill in the blank)				Ans.	Marks
1	State True or False			2x3	
	(i)	Diphenylthiocarbazono is used in the limit test for Lead.		[]	
	(ii)	In X-ray, low intensity electromagnetic rays (gamma rays) are used that penetrate the body tissues but cannot penetrate bones.		[]	
	(iii)	Hypertonic solutions have a low osmotic pressure than a particular fluid, typically a body fluid or intracellular fluid.		[]	
	Match the following			2x4	
	(iv)	Acidifiers	(a)	Sodium orthophosphate	
	(v)	Antimicrobials	(b)	Potash alum	
	(vi)	Cathartics	(c)	Ammonium chloride	
	(vii)	Astringents	(d)	Iodine and its preparations	
	(iv)	_____	(v)	_____	
	(vi)	_____	(vii)	_____	
	Fill in the blank			2x3	
	(viii)	Achlorhydria is the absence or decrease of _____ in the gastric secretion.		_____	
	(ix)	A _____ is a substance used for cleaning the reachable surfaces of the teeth with a toothbrush.		_____	
	(x)	In _____ a fluid containing a suitable combination of carbohydrates and electrolytes is given through oral route.		_____	

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Winter Examination 2018 (MAIN/ATKT)

BPharm Semester I

Paper: BP104T

Subject: PHARMACEUTICAL INORGANIC CHEMISTRY

Note: (1) Section B consists of 3 Long Answer Type Questions of 10 marks each.

Attempt **any two questions** from this Section.

(2) Section C consists of 9 Short Answer Type Questions of 5 marks each.

Attempt **any seven questions** from this Section.

Section B & C

Time- **Two and Half Hours**

Maximum Marks- **55 (Section B: 20 marks; Section C: 35 marks)**

Section B: Long Answer Type; Attempt <u>any two</u> questions from this Section.		
2.	What are impurities? Give types, source limit, effects and quality control of impurities. Give a detail note on pharmaceutical impurities.	(6+4)
3.	What is limit test? Write limit test of Arsenic. Draw the apparatus required and also write the equations involved for limit test for arsenic.	(5+5)
4.	What is radioactivity? Explain the properties of different types of radiations. Give a detailed note on radioisotopes and their application in pharmacy.	(5+5)
Section C: Short Answer Type; Attempt <u>any seven</u> questions from this Section.		
5.	Explain the principles and reactions involve in the limit test for chlorides and sulphate.	(5)
6.	Describe the different theories of acid and base with examples and limitations.	(5)
7.	Describe Oral Rehydration Therapy (ORT). What is ORS solution? Describe the various types of ORS solutions.	(2+3)
8.	What are desensitizing and anti-caries agents? Classify desensitizing agents. Give uses of the Sodium fluoride.	(2+3)
9.	What are the requirements of ideal antacids? Write a note on combination antacids. Also give the preparation and uses of Sodium bicarbonate.	(2+3)
10.	What are antimicrobials? Classify them and give examples? Write a note on Iodine and its preparations.	(3+2)
11.	What are emetics? Mention their characteristics and examples. Give preparation, properties and uses of Copper sulphate.	(3+2)
12.	Write a note on haematinics with characteristics and examples. Give preparation, properties, uses and assay of Ferrous sulphate.	(3+2)
13.	Write a note on handling and storage of radiopharmaceuticals.	(5)

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Winter Examination 2018 (Main)

BPharm Semester I

BP105T - COMMUNICATION SKILLS

- Note: (1) Section A consists of 2 Long Answer Type Questions of 10 marks each.
Attempt any ONE questions from this Section.
- (2) Section B consists of 7 Short Answer Type Questions of 5 marks each.
Attempt any FIVE questions from this Section.

Time: 1 Hrs 30 Minutes

MM: 35

SECTION A

1. What is communication? Discuss the various stages involved in the process of communication. **10**

OR

- Explain all the factors affecting perspective in communication in detail. Discuss the benefits of written communication over oral communication. **5+5**

SECTION B

1. What are the barriers to communication? Discuss any two barriers in detail. **5**
2. How written communication can be made effective? **5**
3. Compare direct communication style with considerate communication style. **5**
4. Write different steps in planning a presentation. **5**
5. What is the purpose of an interview from the employers and employee's side. **5**
6. Write Do's and Don't of a group discussion. **5**
7. Write steps to improve listening skills. **5**

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Roll No. _____

Winter Examination 2018 (Main)

BPharm Semester I

BP105T - COMMUNICATION SKILLS

- Note: (1) Section A consists of 2 Long Answer Type Questions of 10 marks each.
Attempt any ONE questions from this Section.
(2) Section B consists of 7 Short Answer Type Questions of 5 marks each.
Attempt any FIVE questions from this Section.

Time: 1 Hrs 30 Minutes

MM: 35

SECTION A

1. What is communication? Discuss the various stages involved in the process of communication. **10**

OR

- Explain all the factors affecting perspective in communication in detail. Discuss the benefits of written communication over oral communication. **5+5**

SECTION B

1. What are the barriers to communication? Discuss any two barriers in detail. **5**
2. How written communication can be made effective? **5**
3. Compare direct communication style with considerate communication style. **5**
4. Write different steps in planning a presentation. **5**
5. What is the purpose of an interview from the employers and employee's side. **5**
6. Write Do's and Don't of a group discussion. **5**
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Winter Examination 2018 (Main/ATKT)

BPharm Semester I

BP106RBT – REMEDIAL BIOLOGY

- Note: (1) Section A consists of 2 Long Answer Type Questions of 10 marks each.
Attempt any ONE questions from this Section.
- (2) Section B consists of 7 Short Answer Type Questions of 5 marks each.
Attempt any FIVE questions from this Section.

Time: 1 Hrs 30 Minutes

MM: 35

SECTION A

1. Write in detail about the five kingdoms classification system. **10**
- OR**
- Write the microscopic difference between monocot stem and dicot stem. **10**

SECTION B

1. Draw the structure of plant cell and write the function of Vacuoles and Mitochondria. **3+1**
2. Write the difference between living and non-living organism with suitable examples. **5**
3. Write a note on human respiratory system. **5**
4. Write the function of hormones secreted by Pituitary gland and Thyroid gland. **5**
5. Describe the digestive system with the help of labeled diagram. **5**
6. Write the working of Heart with the help of labeled diagram. **5**
7. i. Draw the structure of Neuron **2+2**
ii. Write a note on morphological characters of flower **+1**
iii. Enlist the macro and micronutrients

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Winter Examination 2018 (Main/ATKT)

BPharm Semester I

BP106RBT – REMEDIAL BIOLOGY

- Note: (1) Section A consists of 2 Long Answer Type Questions of 10 marks each.
Attempt any ONE questions from this Section.
(2) Section B consists of 7 Short Answer Type Questions of 5 marks each.
Attempt any FIVE questions from this Section.

Time: 1 Hrs 30 Minutes

MM: 35

SECTION A

1. Write in detail about the five kingdoms classification system. **10**
- OR**
- Write the microscopic difference between monocot stem and dicot stem. **10**

SECTION B

1. Draw the structure of plant cell and write the function of Vacuoles and Mitochondria. **3+1**
2. Write the difference between living and non-living organism with suitable examples. **5**
3. Write a note on human respiratory system. **5**
4. Write the function of hormones secreted by Pituitary gland and Thyroid gland. **5**
5. Describe the digestive system with the help of labeled diagram. **5**
6. Write the working of Heart with the help of labeled diagram. **5**
7. i. Draw the structure of Neuron **2+2**
ii. Write a note on morphological characters of flower **+1**
iii. Enlist the macro and micronutrients

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Winter Examination 2018 (Main/ATKT)

BPharm Semester I

BP106RMT – REMEDIAL MATHEMATICS

- Note: (1) Section A consists of 2 Long Answer Type Questions of 10 marks each.
Attempt any ONE questions from this Section.
(2) Section B consists of 7 Short Answer Type Questions of 5 marks each.
Attempt any FIVE questions from this Section.

Time: 1 Hrs 30 Minutes

MM: 35

SECTION A

1. A. Verify Cayley Hamilton theorem for the following matrix 5

$$A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix}$$

- B. Find the Domain and Range of the following. 2½

(i) $\frac{1}{x^2 - 1}$

(ii) $\frac{x^2}{1 + x^2}$

+2½

OR

2. A. Differentiate 5

$$\frac{d}{dx} \left[\frac{3}{x^4} + 7 \sec x - 5e^{3x} \sin x \right]$$

- B. Find out the cofactors of each elements of the determinant 5

$$\Delta \begin{vmatrix} 0 & 1 & -1 \\ 2 & -1 & 3 \\ 3 & 4 & 5 \end{vmatrix}$$

SECTION B

1. Find the partial fraction decomposition of 5

$$\frac{2x - 3}{x^2 + x}$$

2. If $y = e^{(\sin x + x^2)}$ then find $\frac{dy}{dx}$ 5
3. Evaluate the following. 2½
 (a) $\int x^2 \cos(2x^2 + 4) dx$ (b) $\int \frac{x^2 dx}{x^6 + 1}$ +2½
4. Evaluate the following. 2½
 (a) $\lim_{x \rightarrow 0} \frac{[\sqrt{1+x} - \sqrt{1-x}]}{x}$ +2½
 (b) $\lim_{x \rightarrow 1} \frac{x^2 - 3x + 2}{2x^2 + x - 3}$
5. Solve the equation using Cramer's rule 5

$$\begin{aligned} 2x + 3y - z &= 1 \\ 4x + y - 3z &= 11 \\ 3x - 2y + 5z &= 21 \end{aligned}$$
6. Prove that 2½
 (a) Evaluate $f(x) = \begin{cases} \frac{x+4}{x+4} & x \neq 4 \\ 1 & x = -4 \end{cases}$ +2½
 (b) Write down the properties of logarithms.
7. (a) Evaluate $\int \frac{2 + 3 \cos x}{\sin^2 x} dx$ 2½
 (b) Differentiate $6 \log_a x + 7 \tan x - 2x^{1/3}$ +2½