FACULTY OF PHARMACY

B. Pharmacy I-Semester (PCI) (Main) Examination, January 2018

Subject : Human Anatomy and Physiology – I

Time : 3 Hours   Max. Marks: 75

Note: Answer all questions from Part – A, any two questions from Part – B and any seven questions from Part - C.

PART – A (10 x 2 = 20 Marks)

Answer All Questions. All Questions carry equal marks.

1   Write about the functions of plasma.

2   Define the following terms:
    (i) Anterior (ii) Superior (iii) Proximal Lateral

3   Explain briefly about cardiac muscle.

4   Define joint and explain the structural classification of joints.

5   Define tissue and write the location and functions of simple squamous epithelium.

6   Define the terms fibrillation and myocardial infarction.

7   List the different types of taste buds and write their functions.

8   Write about the functions of ribosomes with diagram.

9   Explain different types of cartilage tissues.

10 Define osmosis and diffusion.

PART – B (2x10=20 Marks)

Answer Any Two Questions. All Questions carry equal marks.

11 Write about the process of hemostasis in detail and add a note on clotting factors.

12 Define blood pressure and explain how to regulate the blood pressure.

13 What are cranial nerves? Explain in detail about the cranial nerves.

PART – C (7x5=35 Marks)

Answer Any Seven Questions. All Questions carry equal marks.

14 Explain the components of neuromuscular junction.

15 Explain the various parts of the following bones with neat diagrams

    (a) Humerus   (b) Sacrum

16 Define anemia and explain different types of anemia.

17 Describe the structure and functions of thymus gland.

18 Explain the structure and functions of plasma membrane.

19 Write about the structure and functions of sympathetic nervous system.

20 What is ECG and correlate the ECG with cardiac cycle events?

21 Describe the structure of eye with a neat labeled diagram.

22 What are synovial joints and describe the different types of synovial joint?

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FACULTY OF PHARMACY

B. Pharmacy I-Semester (PCI) (Main) Examination, January 2018

Subject : Pharmaceutical Analysis – I

Time : 3 Hours

Max. Marks: 75

Note: Answer all questions from Part – A, any two questions from Part – B and any seven questions from Part - C.

PART – A (10x2=20 Marks)

Answer All Questions. All Questions carry equal marks.

1 Define Pharmaceutical Analysis and write the Importance.
2 Define Molarity and Write the formula for Molarity?
3 (i) How to prepare 1000ml of 0.1N NaOH Solution?
   (ii) How to prepare 1000ml of 0.1N $KMnO_4$ Solution?
4 Mention any four acid-base indicators in acid base titrations?
5 What is precipitation titration and how to prepare 0.1M Silver Nitrate solution?
6 Define Complexing agent and Sequestering agent?
7 Differentiate Co-precipitation and Post Precipitation with Examples in Gravimetry titration?
8 Explain Oxidation-Reduction Reaction with one example?
9 Differentiate Conductance and Resistance?
10 What is the difference between Iodometry and Iodimetry?

PART- B (2x10=20 Marks)

Answer any TWO Questions. All questions carry equal marks.

11 (a) Write the Different types of Errors in pharmaceutical analysis?   (5)
   (b) Write the methods of minimising Errors in Analysis?   (5)

12 (a) Write the Neutralisation curves for strong acid V/S strong base titrations.   (5)
   (b) Explain acidimetry in Non-Aqeous titration with an Example?   (5)

13 (a) Explain Mohrs method in Precipitation Titration?   (5)
   (b) Write the Principle & Applications of Iodometry?   (5)

PART- C (7x5=35 Marks)

Answer any SEVEN Questions. All questions carry equal marks.

14 Explain Briefly about Significant figures with Examples?
15 Explain the Limit test for Chlorides?
16 Write a short note on Common Ion Effect & Salt Hydrolysis?
17 Write the Principle & procedure involved in Standardisation of 0.1N $HClO_4$
18 Explain Masking agents and Demasking agents in Complexometric titrations?
19 Write a short note on p^M Indicators?
20 Write a Short note on Redox Indicators?
21 Explain Different End point methods in potentiometric titrations?
22 Write about the construction and working of an electrode.

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FACULTY OF PHARMACY

B. Pharmacy I-Semester (PCI) (Main) Examination, January 2018

Subject : Pharmaceutics – I

Time : 3 Hours

Max. Marks: 75

Note: Answer all questions from Part – A, any two questions from Part – B and any seven questions from Part - C.

PART – A (10x2=20 Marks)
Answer All Questions. All Questions carry equal marks.
1 Define paste? Mention various types of bases employed in the preparation of pastes?
2 What are eutectic mixture? Give two examples.
3 Define synergism and give one example?
4 Define and Classify suspensions?
5 What are effervescent powders? Give two examples.
6 Find the incompatibility present in the given formulae and write the correction method
   Castor oil   15 ml
   Water   up to 60 ml   make an emulsion
7 Convert 15.6° U/P into percentage strength of alcohol by volume?
8 What are the stability problems of emulsion?
9 What is the dose of a medicament for a child that weighing 28lb, if the average adult dose is 100mg?
10 What do you mean by inscription and subscription of a prescription?

PART – B (2x10=20 Marks)
Answer any TWO questions. All questions carry equal marks.
11 Define ointment. Give an account of various bases used in the preparation of ointment. Add a note on the method of preparation of ointment?
12 Classify monophasic liquid dosage forms? Discuss about the preparations which are used in syrups and elixirs?
13 What are incompatibilities? Describe in detail about physical incompatibilities and their remedies with suitable examples?

Part – C (7x5=35 Marks)
Answer any SEVEN questions. All questions carry equal marks.
14 Define isotonicity? What is the concentration of sodium chloride required to prepare 1.5% W/V Procaine HCl isoosmotic with blood plasma? (F.P of 1% Procaine HCl is -0.122°C and F. P of 1% sodium chloride is – 0.576°C)
15 Write a note on history of profession of pharmacy in India?
16 Differentiate
   (a) Lotions and liniments
   (b) Suspensions and emulsions
17 Write a note on alkaloidal chemical incompatibility with examples and their correction method.
18 Explain about the solubility enhancement techniques?
19 Define emulsions? Explain the various identification tests for emulsions?
20 Write a short note on thickening agents and wetting agents?
21 Write a short note on ear drops, nasal drops?
22 Write in detail about mandl's paint?

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FACULTY OF PHARMACY

B. Pharmacy I-Semester (PCI) (Main) Examination, January 2018

Subject : Pharmaceutical Inorganic Chemistry

Time : 3 Hours   Max. Marks: 75

Note: Answer all questions from Part – A, any two questions from Part – B and
any seven questions from Part - C.

PART – A (10x2=20 Marks)

Answer All Questions. All Questions carry equal marks.
1   Define i) Limit test   ii) Assay.
2   What is an impurity? Mention the methods to purify inorganic substances.
3   Define Bronsted-Lowry acid and base.
4   List out the methods of adjusting isotonicity.
5   Write about oral rehydration salts.
6   What are dentifrices give some examples.
7   Define the terms i) expectorant ii) emetic.
8   What are antacids? Give some examples.
9   Write the uses of hydrogen peroxide.
10 List out various iodine preparations.

PART – B (2x10=20 Marks)
Answer any TWO questions. All questions carry equal marks.
11 Discuss about sources of impurities in pharmaceuticals.
12 (a) What are electrolyte replenishers? Write the method of preparation, assay and uses
       of sodium chloride.
   (b) What are anticaries agents? Explain the role of fluorides in preventing dental caries.
13 (a) Define and classify antimicrobial agents. Write their mechanism of action.
   (b) Write the method of preparation, assay and uses of ammonium chloride.

PART – C (7x5=35 Marks)
Answer any SEVEN questions. All questions carry equal marks.
14 Explain the principle and procedure involved in the limit test for sulphates.
15 What are haematinics? Mention the method of preparation, assay and uses of ferrous
   sulphate.
16 Write the composition of Ringer's solution. Explain its importance.
17 Define and classify catharatics. Add a note on magnesium sulphate.
18 What are antidotes? Explain about any one antidote used for cyanide poisoning.
19 Discuss the Labeling, handling and storage of Radiopharmaceuticals.
20 Discuss about physiological acid-base balance.
21 Give the method of preparation, assay and uses of copper sulphate.
22 Define astringent? Write the method of preparation and uses of zinc sulphate.

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FACULTY OF PHARMACY

B. Pharmacy I-Semester (PCI) (Main) Examination, February 2018

Subject : Remedial Biology

Time : 1 ½ Hours   Max. Marks: 35

Note: Answer any one question from Part – A, any five questions from Part – B.

PART – A (1x10=10 Marks)

Answer any ONE of the following.

1 Describe the structure of human alimentary canal and write a note on the function of digestive enzymes.

2 Describe the mechanism of Respiration in Plants.

PART – B (5x5=25 marks)

Answer any FIVE of the following.

3 Describe the anatomy of dicot stem.

4 How is blood coagulated?

5 Describe the structure of human excretory system.

6 Discuss the functions of hormones.

7 Describe the structure of human brain.

8 What are photosynthetic pigments and discuss the factors affecting photosynthesis?

9 Describe the structure and function of plant cell?

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FACULTY OF PHARMACY
B. Pharmacy I-Semester (PCI) (Main) Examination, February 2018

Subject : Remedial Mathematics

Time : 1 ½ Hours Max. Marks: 35

Note: Answer any one question from Part – A, any five questions from Part – B.

PART – A (1x10=10 Marks)

Answer any ONE of the following.

1 (a) If $(2.3)^x = (0.023)^y = 10000$ then find the value of $\dfrac{1}{x} - \dfrac{1}{y} = ?$

  (b) Verify the following points are collinear (1,2), (3,4) (5,6) (7,8) ?

2 (a) Solve Tany.e^x dx – $\sec^2 y$ (1+e^x) dy = 0
  (b) Solve the following simultaneous linear equations by using matrix Inversion method.
      x+y+z=6; x-y+z=2; 2x-y+3z=9

PART- B (5x5=25 Marks)
Answer any FIVE Questions.

2 Show that $\lim\limits_{x\to 0} \dfrac{\cos ax - \cos bx}{x^2} = \dfrac{b^2 - a^2}{2}$

4 If $A = \begin{pmatrix} -1 & -2 & -2 \\ 2 & 1 & -2 \\ 2 & -2 & 1 \end{pmatrix}$ then show that adj(A)=3A^T and find A^{-1}?

5 If $ax^2 + 2hxy + by^2 = 0$ then find $\dfrac{d^2 y}{dx^2}$?

6 Evaluate $\int 2x\cos^2 x\,dx$.

7 If $L[f(t)]$=f(s) then show that $L\left[e^{at}f(t)\right] = f(s-a)$ and $L\left[e^{-at}f(t)\right] = f(s+a)$

8 If $x^{\log y} = \log x$ then show that $\dfrac{dy}{dx} = \dfrac{y}{x}\left[\dfrac{1-\log x.\log y}{(\log x)^2}\right]$

9 Write the applications of Remedial Mathematics especially, Logarithmic matrices. Differentiation and Integration in Pharmacy.

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