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FF—01—2017

FACULTY OF PHARMACEUTICAL SCIENCE & TECHNOLOGY

B.Pharm. (First Year) (First Semester) EXAMINATION

NOVEMBER/DECEMBER, 2017

HUMAN ANATOMY AND PHYSIOLOGY—I

(Tuesday, 21-11-2017)

Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) Draw neat labelled diagram wherever necessary.

(iii) Figures to the right indicate full marks.

1. Answer the following :

20

(a) Define anatomy and physiology.

(b) Write the functions of Endoplasmic reticulum and mitochondria.

(c) Write normal values of Hemoglobin content in male and female.

(d) Draw a neat labelled diagram of spleen.

(e) Enlist bones of lower limb.

(f) Give composition and function of synovial fluids.

(g) Define cardiac output. How is it calculated ?

(h) Differentiate between arteries and veins.

(i) Name any six cranial nerves.

(j) Draw a neat labelled diagram of internal structure of ear.

2. Answer any two of the following :

2×10=20

(a) Define coagulation. Describe in detail mechanism of blood coagulation.

(b) What is autonomic nervous system ? What are its major divisions ? Explain the distribution and functions of each division.

(c) What is tissue ? Explain its types and subtypes with neat labelled diagram.

P.T.O.

3. Answer any *seven* of the following :

7×5=35

- (a) Draw a neat labelled diagram of plasma membrane and discuss about passive transport across cell membrane.
- (b) Draw a neat labelled diagram of skin and explain its structure and function.
- (c) Explain the conducting system of heart with the help of neat labelled diagram.
- (d) Explain the short-term control of blood pressure.
- (e) Draw a neat labelled diagram of eye and explain structure and function of organ of sight.
- (f) With the help of neat labelled diagram explain structure and function of lymph node.
- (g) Draw a neat labelled diagram of internal structure of heart and explain the process of pulmonary circulation.
- (h) Explain the physiology of muscle contraction.
- (i) Explain structure and movement of shoulder joint.

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FF—2—2017

FACULTY OF PHARMACEUTICAL SCIENCES

B. Pharm. (First Year) (First Semester) EXAMINATION

OCTOBER/NOVEMBER, 2017

PHARMACEUTICAL ANALYSIS

Paper I

(Thursday, 23-11-2017)

Time : 10.00 a.m. to 1.00 p.m.

Time—Three Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) Answer to the point only.

(iii) Figures to the right indicate full marks.

1. Answer the following : 20
- (a) Give the importance of pharmaceutical analysis.
 - (b) What do you mean by acid-base titration ?
 - (c) Define acidimetry and alkalimetry titration.
 - (d) What do you mean by masking and demasking agents ?
 - (e) Define parts per million and parts per billion.
 - (f) Name the indicators used in complexometric titrations.
 - (g) State the Ilkovic equation.
 - (h) Give the applications of potentiometric titration.
 - (i) Define cerimetry and iodimetry.
 - (j) What is oxidation and reduction ?
2. Solve any *two* of the following : 20
- (a) Define error and classify it in detail.
 - (b) What do you mean by precipitation titration ? Explain in detail about Volhard's method.
 - (c) Give the construction and working of standard hydrogen electrode and calomel electrode.

P.T.O.

3. Solve any *seven* of the following :

- (a) Define primary standard substance and give the ideal characteristics of primary standard substance.
- (b) What do you mean by non-aqueous titration ? Give the classification of non-aqueous solvents with examples.
- (c) Write the estimation of magnesium sulphate.
- (d) Explain in short steps involved in Gravimetric analysis.
- (e) Write a short note on Iodimetry and Iodometry titrations.
- (f) Give the procedure for preparation and standardization of Hydrochloric acid.
- (g) Write the applications of polarography.
- (h) Discuss in short about Ostwald theory of acid-base indicators.
- (i) Explain the construction and working of glass electrode.

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FF—03—2017

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

B.Pharm. (First Year) (First Semester) EXAMINATION

NOVEMBER/DECEMBER, 2017

PHARMACEUTICS—I

Paper BP-103T

(Saturday, 25-11-2017)

Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) Answer to the point only.

(iii) Figures to the right indicate full marks.

(iv) Illustrate your answers with neat sketches wherever necessary.

1. Solve the following :

10×2=20

(a) Define sterile and non-sterile dosage form.

(b) Give an ideal format of prescription.

(c) Give the importance of date in prescription.

(d) What is the duty of pharmacist in case the medicine is prescribed in overdose ?

(e) Calculate the amount of 95% alcohol required to prepare 400 ml of 45% alcohol.

(f) Define isotonic solution.

(g) Enlist different stability parameter for suspension.

(h) Define the term "displacement value".

(i) Enlist different excipients used in semisolid dosage form.

(j) Give Young's and Dilling's formula for calculation of child dose.

2. Solve any two of the following :

2×10=20

(a) Define suppositories. Explain in detail different methods of preparation of suppositories.

P.T.O.

(b) Define and classify powders. Give the advantages and disadvantages of powder.

(c) Explain the different factors affecting dose of Drug.

3. Solve any *seven* of the following :

7×5=35

(a) Define Emulsion. Give its stability problems and methods to overcome it.

(b) Give method of preparation of suspension.

(c) Define mouthwash. Give its method of preparation.

(d) Write a brief note of Dusting powder.

(e) Describe in brief about the different types of bases used in manufacture of suppositories.

(f) Define therapeutic incompatibility. Describe different reason of Therapeutic incompatibility.

(g) Write in brief about history of profession of pharmacy in India in relation to pharmacy education.

(h) Write a note on term 'superscription' in prescription.

(i) Write in brief about different factors influencing dermal penetration of drug.

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FF-04-2017

FACULTY OF PHARMACEUTICAL SCIENCE

B.Pharm. (First Year) (First Semester) EXAMINATION

NOVEMBER/DECEMBER, 2017

PHARMACEUTICAL INORGANIC CHEMISTRY—I

(Monday, 27-11-2017)

Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) Answer to the point only.

(iii) Figures to the right indicate full marks.

1. Answer the following : 20
 - (a) Give the importance of pharmaceutical Inorganic chemistry.
 - (b) Write about Zinc Oxide Eugenol (ZOE) cement.
 - (c) Write any *two* chemical properties of boric acid.
 - (d) Give the properties of Gamma rays.
 - (e) Define buffer action and buffer capacity.
 - (f) Identify the category of ammonium chloride and define it.
 - (g) Define emetics and expectorant with example.
 - (h) How much silver nitrate is needed to prepare 100 ml of Isotonic solution using Sprowl's method ?
(given that : $E\ 1\% = 0.68$).
 - (i) Draw a neat labelled diagram of arsenic apparatus.
 - (j) What is astringent ?

2. Answer any *two* of the following : 20
 - (a) What is Impurity ? Discuss in detail sources of impurities of pharmaceuticals and give the effect of impurities.
 - (b) What are antimicrobial agents ? Enlist the various classes of antimicrobial agent and discuss the mechanism of action of antimicrobial agent.
 - (c) What are radiopharmaceuticals ? Give the therapeutic and diagnostic application of radioisotopes.

P.T.O.

3. Answer any *seven* of the following :

- (a) Describe the various concepts of acids and bases.
- (b) Define limit test. Write the principle involved in the limit test for chloride and sulphate.
- (c) Write a note on electrolyte used in replacement therapy.
- (d) What are dental products ? Discuss the role of fluorides in preventing tooth carries. Give a brief account of sodium fluoride.
- (e) Justify the importance of :
 - (i) Dilute HNO_3 in limit test for chloride.
 - (ii) K_2SO_4 in limit test for sulphate.
 - (iii) Citric acid in limit test for iron.
 - (iv) H_2S in limit test for heavy metal
 - (v) Ammonium citrate is added in the limit test for lead.
- (f) Why antacids are given in combination always ? Explain with some marketed preparations. Write the storage condition and uses of Aluminium hydroxide Gel.
- (g) Write the chemical formula and medicinal uses of the following (any *five*) :
 - (i) Potash alum
 - (ii) Sodium thiosulphate
 - (iii) Ferrous sulphate
 - (iv) Boric Acid
 - (v) Kaolin
 - (vi) Calcium carbonate
 - (vii) Epsom salt.
- (h) Define Antidote. Give the classification of antidote. Which antidotes are used for cyanide poisoning ? Explain their mechanism of action.
- (i) Give the assay of hydrogen peroxide.