Code No. : **2659**

FACULTY OF PHARMACY

B.Pharm. (New) (Semester – I) (Main) Examination, Oct./Nov. 2012

PHARMACEUTICAL ANALYSIS – I

(Chemical Analysis)

Time : 3 Hours]   [Max. Marks : 70

Note : *Answer **all** questions.*
*All questions carry **equal** marks.*

1. a) i) Define primary standard and secondary standard with examples. Write the ideal properties of a primary standard substance.   6

   ii) Define the terms :   **(4×2=8 Marks)**
       A) Accuracy
       B) Precision
       C) Specificity
       D) Linearity.

                              OR

   b) i) Write a note on different methods of expressing the concentration of solutions.   6

   ii) Explain the calibration of volumetric flask.   4

   iii) Calculate the weight of NaOH in 1N solution, required to neutralise 25 ml of 1 N H_2SO_4.   4

2. a) i) Write a note on common ion effect.   6

   ii) What are buffers ? How buffers are prepared ? Explain their mechanism of action.   8

                              OR

   b) i) Write about the preparation and standardization of 0.1N NaOH solution.   4

   ii) Explain Bronstead Lowry and Lewis theories of acids and bases.   6

   iii) Solubility product of $Mg(OH)_2$ is 3.4×10^{-11} mol³/L³. Calculate its solubility in g/L.   4

(This paper contains 2 pages)   1   **P.T.O.**

3. a) i) Write a note on Redox indicators.   5

   ii) Explain the principles of Gravimetric Analysis and mention its applications. 5

   iii) How do you prepare and standardize 0.1N $KMNO_4$?   4

                                    OR

   b) i) Write short notes on precipitation and co-precipitation methods used in Gravimetric Analysis.

                                                                              8

   ii) Calculate the normality of 2M $KMnO_4$.   3

   iii) Write a note on self indicators.   3

4. a) i) Explain the masking and demasking agents with suitable examples.   7

   ii) Discuss the principle, procedure and apparatus used in the assay of oxygen.

                                                                              7

                                    OR

   b) i) How do you prepare and standardize 0.1 N $HClO_4$.   4

   ii) Explain Iodometry and Iodimetry.   6

   iii) Write the principle involved in complexometric titrations.   4

5. a) i) Define the terms with suitable examples :   (3×2=6 Marks)
       A) Molecular weight
       B) Empirical formula
       C) Percentage yield.

   ii) Calculate the percentage composition of elements in Na_2CO_3.   4

   iii) Write the mass balance equation for the following :   (2×2=4 Marks)

       A) $Ba(OH)_2 + NaCl \rightarrow BaCl_2 + NaOH$

       B) $CaCl_2 + NaNO_3 \rightarrow Ca(NO_3)_2 + NaCl$.
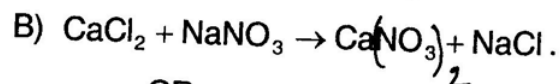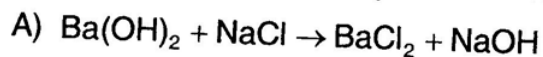
                                    OR

   b) i) How many moles of Na_2CO_3 are present in 26.5 gm of sodium carbonate. 4

   ii) Describe the mole concept and Avogadro number.   5

   iii) Chemical analysis of a carbon compound gave 10.06% carbon, 0.84% Hydrogen and 89.10% Chlorine. Calculate the empirical formula of the compound.

                                                                              5

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Code No. : **2661**

FACULTY OF PHARMACY

I Year I Semester (Main) Examination, Oct./Nov. 2012

COMMUNICATIVE ENGLISH

Time : 3 Hours]   [Max. Marks : 70

Instructions : *Answer **all** questions.*
*All questions carry **equal** marks.*

PART – A   (4×5=20 Marks)

1. a) What are the various types of barriers to communication ? How can these be removed ?

   OR

   b) Explain the role and importance of communication.

2. a) "Selection of medium is the most essential concept in effective communication" – Discuss.

   OR

   b) "Preparation and presentation are the two essential ingredients of making a speech" – Explain.

3. a) Write a short notes on British English.

   OR

   b) What is the use of Thesaurus ?

4. a) What is memorandum ? Explain its features and importance with the help of a Model Memo.

   OR

   b) As the Librarian of your organization write a letter claiming compensation for 39 books, which arrived in a damaged condition.

PART – B   (4×5=20 Marks)

1. Rewrite the correct answers of the following :

   1) I know the most easiest way to solve this problem.

   2) Never I have seen such a huge library.

(This paper contains 3 pages)   1   **P.T.O.**

3) I have gone out yesterday ?

4) I congratulated him for his promotion.

5) No one likes his proudness.

2. Give the synonym for the following :

1) Legacy

2) Aspiration

3) Incessantly

4) Ingenious

5) Enormous

3. Explain the following one word substitutes in **one** or **two** sentences :

1) Hayrick

2) Irresistible

3) Drudge

4) Inconceivable

5) Seamstress.

4. Rewrite the following sentences as directed :

1) I have been ill _____ a week.

   (Use appropriate preposition)

2) Ganges is considered sacred river by many.

   (Insert appropriate article)

3) The manager said "Where is your application".

   (Change into indirect speech)

4) The machine wraps the bread automatically.

   (Change into passive voice)

5) I _____ (work) on the report since eight 'O' clock.

   (Use the correct form of verb)

2

PART – C
(5×6=30 Marks)

1. a) Why do some boys turn their irritation towards their mothers ?

   OR

   b) What does the author think about rebelliousness in adolescents ?

2. a) Why was Carnegie a huge success as steel king ?

   OR

   b) What made Carnegie's life always full and interesting ?

3. a) What is the meaning of "Civilised" according to CEM Joad in our own civilization ?

   OR

   b) How does CEM Joad praise our civilization ?

4. a) "The secret of work is a remarkable exposition of non-attachment to action." Explain.

   OR

   b) According to Swami Vivekananda, when will misery come to an end ?

5. a) "Drafting a report is a Scientific and Systematic process". Explain.

   OR

   b) Write a letter of application for the post of computer programmer in Techno Soft Pvt. Ltd, Anna Marg, Chennai.

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FACULTY OF PHARMACY

B.Pharmacy II Year I Semester (Main) Examination, Oct./Nov. 2012

PHARMACEUTICAL ENGINEERING – I

Time: 3 Hours]　　　　　　　　　　　　　　　　　　　[Max. Marks: 70

Note : Answer **all** questions. **All** questions carry **equal** marks.

1. a) i) Define unit operation and unit process with examples.　　　　　**4**
　　ii) Define corrosion and explain the theories of corrosion.　　　　　**7**
　　iii) Write about the merits and demerits of cast iron as a material of plant construction.　　**3**
　　　　　　OR
　b) i) Write about various types of alloys of stainless steel along with their composition, merits and demerits.　　**6**
　　ii) Write about dimensionless equation with example.　　　　　**3**
　　iii) Classify corrosions and explain any two methods for combating corrosion.　**5**

2. a) i) What are the various types of energy losses in fluid flow ?　　　**4**
　　ii) Differentiate the black body and grey body. State Stefan's Boltzmann law.　　**4**
　　iii) State Fourier's law and derive an equation for heat transfer through a metal wall.　　**6**
　　　　　　OR
　b) i) Explain the construction, working, merits and demerits of vacuum pump.　**6**
　　ii) Define surface and overall coefficients.　　　　　　　**2**
　　iii) Write about the construction, working advantages and disadvantages of single pass tubular heater.　　**6**

3. a) i) Define conveying and explain about principle, construction, working, merits and demerits of Belt conveyors.　　**8**
　　ii) Classify centrifugal pumps and give the construction and working of turbine pumps.　　**6**
　　　　　　OR
　b) i) Write about the principle, working, construction and advantages of Penumatic conveyors.　　**9**
　　ii) Write short notes on globe valve.　　　　　　　　**5**

4. a) i) Define the following : 4
   a) Humidity
   b) Dewpoint
   c) Humid heat
   d) Enthalpy.
   ii) Explain about the mechanism of dehumidification. 6
   iii) Write about the applications of air conditioning. 4

   OR

   b) i) Explain the humidity chart with its applications. 9
   ii) Write about the approaches for achieving air conditioning. 5

5. a) i) Explain the theory of filteration. 6
   ii) Classify the centrifuges and explain in detail about perforated basket centrifuge. 8

   OR

   b) i) Write the theory involved in centrifugation with its applications in Pharmacy. 7
   ii) Explain the construction, working and advantages of rotary drum filters. 7

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Code No. : **2660**

FACULTY OF PHARMACY

B.Pharmacy. Year I Semester (Main) Examination, Oct./Nov. 2012

PHARMACEUTICAL MICROBIOLOGY

Time: 3 Hours]   [Max. Marks: 70

Note : *Answer all questions.*
     All questions carry equal marks.

1. a) Describe the nutritional requirement for the efficient growth of microorganism.   8

    b) Differentiate between virus and bacteria.   6

         OR

    a) Discuss the modes of identification of bacterial strains from culture characteristics.   8

    b) Distinguish between autotrophs and heterotrophs.   6

2. a) Explain the process of physical and chemical mutagenesis.   9

    b) Write a note on Ziehl Neelson's staining and its significance.   5

         OR

    a) Describe with the help of a flow diagram the a sexual reproduction of protozoa.   8

    b) Differentiate between phenotypic and genotypic changes.   6

3. a) Give a detailed account of the equipment and process employed for moist heat sterilization.   9

    b) Briefly explain the terms :   5
       a) Thermal death time
       b) Decimal reduction time.

         OR

    a) Classify chemical antimicrobial agents. Add a detailed note on phenol co-efficient technique.   9

    b) Use of aldehydes to control microbial contamination.   5

4. a) What is immunity ? Discuss about cellular immunity. 8

   b) Distinguish between exotoxin, endotoxin and toxoids. 6

   OR

   a) Explain the process of formation of T and B cells. 9

   b) Write a brief account of IgG antibodies. 5

5. a) Give a detailed account of the sexual life cycle of the malarial parasite. 8

   b) Write a note on the importance of strepto myces species. 6

   OR

   a) Explain the general modes of transmission of diseases. What is the causative organisms and symptoms of typhoid ? 8

   b) Add a note on microbial tests carried out on potable water. 6

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Code No. : **2657**

FACULTY OF PHARMACY

B.Pharmacy II Year I Semester (Main) Examination, Oct./Nov. 2012

PHARMACEUTICAL ORGANIC CHEMISTRY – I

Time: 3 Hours]   [Max. Marks: 70

Note : Answer **all** questions. **All** questions carry **equal** marks.

1. a) i) Write the different types of covalent bond.   5

   ii) Give a note on polarity of molecules.   5

   iii) Describe the isomerism exhibited by maleic acid and fumaric acid.   4

   OR

   b) Explain the following terms with suitable examples :   (4×3.5 =14 Marks)

   i) Chiral molecules

   ii) Inductive effect

   iii) Resonance

   iv) Optical isomerism.

2. a) i) Write a note on stability of conjugated alkadienes.   8

   ii) Give any four methods of preparation of cycloalkanes.   6

   OR

   b) Write the synthesis of the following compounds.   7
   i) n-butane
   ii) 1, 3-butadiene.

   c) Write about the mechanism of anti Markonikov's addition.   7

3. a) i) What is Saytzeff rule ? Give an example.   2

   ii) Write a note on Walden inversion.   5

   iii) Write any four methods to synthesize n-propyl bromide.   7

   OR

   b) i) How will you distinguish between primary, secondary and tertiary
       alcohols ?   8

   ii) Write the mechanisms of dehydratron of alcohols.   6

(This paper contains 2 pages)   1   P.T.O.

4. a) i) Write any three methods to synthesize ketones.   7

   ii) Explain in detail the acidity of carboxyllic acids with examples.   7

   OR

   b) i) How will you synthesize the following compounds ?   **(4×2=8 Marks)**
      A) Malonic ester
      B) Propionic acid
      C) Ethyl acetate
      D) Acetal dehyde.

   ii) Write the reactivity and synthetic uses of ethyl acetoacetate.   6

5. a) i) Write a note on diazotisation and Sandmeyer reaction.   6

   ii) Explain about Hinsberg's method of separation of amines.   3

   iii) Write any three chemical reactions of aryldiazonium salts.   5

   OR

   b) i) Discuss any five chemical reactions of amines.   7

   ii) Give any three methods to synthesize amines.   4

   iii) Write two methods for synthesis of nitroalkanes.   3

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