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CJ—07—2019

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

B.Pharm. (Third Year) (Sixth Semester) EXAMINATION

MARCH/APRIL, 2019

PHARMACEUTICAL TECHNOLOGY–I

(DFD-II)

(Tuesday, 23-4-2019) CBPH–61)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—50*

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

     (ii)   Answer to the point only.

1.   Solve any *five* of the following :   5×2=10

   (a)   Give significance of isotonicity of parenterals.

   (b)   Give examples of antioxidant used in ointment.

   (c)   Define solution and emulsion.

   (d)   Define suspending agents.

   (e)   Give ideal properties for vehicle of injection.

   (f)   Enlist different routes of administration for parenteral route.

   (g)   Give ideal properties of suspension.

2.   Solve any *four* :   4×3=12

   (a)   Write a note on rheology of suspension.

   (b)   Define osmotic pressure. Give its significance in designing of parenteral products.

   (c)   Explain theory of emulsification.

   (d)   Describe identification test for emulsion.

   (e)   Describe different ointment bases.

   (f)   Give formulation of non-aqueous solution.

                                                P.T.O.

3. Solve any *four* : 4×7=28

   (a) Describe different methods used for assessing stability of emulsion.

   (b) Give advantages and disadvantages of emulsion dosage form.

   (c) Give advantages and disadvantages of suspension dosage form.

   (d) Write about formulation of injection.

   (e) Give advantages and disadvantages of injection over other dosage form.

   (f) Write about advantages, disadvantages and formulation of oral solution.

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CJ—15—2019

FACULTY OF SCIENCE AND TECHNOLOGY

B.Pharm. (Third Year) (Sixth Semester) EXAMINATION
MARCH/APRIL, 2019

PHARMACEUTICAL TECHNOLOGY

Paper II

(Thursday, 25-4-2019) (BPH—62)   Time : 10.00 a.m. to 12.00 noon

Time—Two Hours   *Maximum Marks—50*

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

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

      (iii)   Answer to the point only.

      (iv)   Figures to the right indicate full marks.

1.   **Solve any** *five* **of the following :**   5×2=10

   (a)   State Bancraft's rule.

   (b)   Define Suspensions. Give the advantages of flocculated suspension.

   (c)   Give the classification of pharmaceutical glass used in parenterals packaging.

   (d)   Define weight per ml in solutions.

   (e)   What is polymorphic transformation in crystal growth of suspension ?

   (f)   What is meant by negative sedimentation in emulsion ?

   (g)   State the importance of Brownian motion of particles in the stability of suspension.

2.   **Solve any** *four* **of the following :**   4×3=12

   (a)   Describe the effect of temperature cycling in the crystal growth of suspension.

   (b)   Explain the following evaluation test of an emulsion :

      (i)   Extent of phase separation.

      (ii)   Globule size determination.

P.T.O.

(c)   Write the effect of pH and viscosity in the stability of solutions.

(d)   Write a note on traffic control in sterile manufacturing area.

(e)   Explain in short the role of zeta potential in the stability of suspension.

(f)   Write a note on closures used in packaging of sterile products.

4×7=28

. Solve any *four* of the following :

(a)   Describe in detail the methods of preparation of suspension.

(b)   Explain in detail about the following :

  (i)   Physical indicators

  (ii)   Chemical indicators.

(c)   Describe in detail about the compounding procedure of solutions.

(d)   Give the construction, working and advantages of the following equipments :

  (i)   Colloidal mill

  (ii)   Rotor and stator Homogenizer.

(e)   Explain the flow diagram for manufacturing of small volume parenterals.

(f)   Differentiate between flocculated and deflocculated suspensions.

CJ—23—2019

FACULTY OF PHARMACEUTICAL SCIENCES

B.Pharmacy (Sixth Semester) EXAMINATION

MARCH/APRIL, 2019

MEDICINAL CHEMISTRY-II

(BPH-63)

(Saturday, 27-4-2019)   Time : 10.00 a.m. to 12.00 noon

Time— Two Hours   *Maximum Marks—50*

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

   (ii)   Draw structures and write reaction wherever necessary.

   (iii)   Your answers should be specific to the question asked.

1.   Solve any *five* of the following :   2×5=10

   (a)   Differentiate between Cardenolides and Bufadienolides.

   (b)   Draw the structure and write IUPAC name of Dexamethasone.

   (c)   Name the heterocyclic ring present in the Nifedipine and Furosemide.

   (d)   How Tolbutamide Show oral hypoglycemic effect ?

   (e)   Draw any *two* structures of Organic Nitrates ?

   (f)   What is the target site of Acetazolamide as an diuretics.

   (g)   Enlist any *two* anabolic steroids.

2.   Solve any *four* of the following :   4×3=12

   (a)   Write the Chemistry of Prostaglandins with therapeutic uses.

   (b)   How will you synthesize verapamil ?

   (c)   Discuss the SAR of Thiazide diuretics ?

   (d)   Write a short note on Adrenocarticosteroids.

   (e)   Explain the MOA of dicoumarol.

   (f)   Write reaction for synthesis of Mexiletine ?

P.T.O.

4×7=28

3. Solve any *four* of the following :

(a) Classify the NSAIDs with one structure from each class.

(b) Write a note on biosynthesis and chemistry of Insulin ?

(c) Define antihypertensive agents ? Classify it with at least one structure from each category ?

(d) Explain, how combination pills and morning after pills are helpful in contraception

(e) Classify Coagulant and anticoagulants with their structure. Give MOA of heparin.

(f) Write the structure and IUPAC name of the following :

   (i) Aspirin

   (ii) Prednisolone

   (iii) Chlorpropamide

   (iv) Paracetamol

   (v) Furosemide

   (vi) Ibuprofen

   (vii) Estradiol.

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CJ—31—2019
FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY
B.Pharm. (Third Year) (Sixth Semester) EXAMINATION
MARCH/APRIL, 2019
CHEMOTHERAPY OF ANTI-INFECTIVE AND NEOPLASTIC DISEASES

(Tuesday, 30-4-2019)   CBPH-64)   Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—50

N.B. :—
(i) All questions are compulsory.
(ii) Figures to the right indicate full marks.
(iii) Draw appropriate diagrams or charts wherever necessary.
(iv) Answer to the point only.

1. Answer any *five* of the following :   5×2=10
   (a) Define Chemotherapy.
   (b) Write therapeutic uses of chloramphenicol.
   (c) What are antiamoebic drugs ? Give any *two* examples.
   (d) Write therapeutic uses of Doxycycline.
   (e) Define antibiotic. Give any *two* examples.
   (f) Write therapeutic uses of ketoconazole.
   (g) What is metastasis ?

2. Solve any *four* of the following :   4×3=12
   (a) Define antifungal drugs. Write mechanism of action of Amphotericin B.
   (b) Classify fluoroquinolones on the basis of generations with example. Write its therapeutic uses.
   (c) Classify antitubercular drugs with appropriate examples.
   (d) Write mechanism of action of Trimethoprim.
   (e) Write pharmacology of vinca alkaloids.
   (f) Classify antimicrobial drugs on the basis of mechanism of action with appropriate example.

P.T.O.

3. Solve any *four* of the following : 4×7=28

(a) Give causative agent of malaria. Write pharmacology of quinine.

(b) Discuss general principles of chemotherapy. Enlist the factors determining the efficacy of chemotherapeutic agent.

(c) What is leprosy ? Write pharmacology of Dapsone. Why multidrug therapy is recommended in leprosy ?

(d) Classify cytotoxic drugs used in chemotherapy of neoplastic diseases. Write pharmacology of cyclophosphamide.

(e) Classify Penicillin derivatives. Write pharmacology of Penicillin.

(f) Write antibacterial spectrum, toxicity and therapeutic uses of Aminoglycoside antibiotics.

CJ—39—2019

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

B.Pharm. (Third Year) (Sixth Semester) EXAMINATION

MAY/JUNE, 2019

SEPARATION TECHNIQUES

(Friday, 3-5-2019)   CBPH-65)   Time : 10.00 a.m. to 12.00 noon

Time—2 Hours   *Maximum Marks—50*

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

   (ii)   Your answer should be specific to the question asked.

   (iii)   Draw neat labelled diagram wherever necessary.

1.   Solve any *five* of the following :   5×2=10

   (a)   Define :

       (i)   Back extraction

       (ii)   Partition coefficient.

   (b)   Differentiate between adsorption and partition chromatography.

   (c)   Write functions of mobile phase used in column chromatography.

   (d)   What is Silica gel G ?

   (e)   Give examples of modified paper used in paper chromatography.

   (f)   Write advantages of HPLC.

   (g)   Enlist different carriers gases used in gas chromatography.

2.   Solve any *four* of the following :   4×3=12

   (a)   A solute is known to have a partition coefficient of 4.0 between water and ether. If 15 ml of aqueous solution of the compound is extracted with one 20 ml portion of ether, what percentage of the origional solute will be found in ether.

P.T.O.

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    (b)   Write importance of separation techniques in pharmaceutical analysis.

    (c)   Write advantages and disadvantages of column chromatography.

    (d)   Describe circular paper chromatography.

    (e)   Give mechanism of separation of gel chromatography.

    (f)   Write a note on 'HETP'.

3.   Solve any *four* of the following :   4×7=28

    (a)   Discuss in detail about instrumentation of PTGC.

    (b)   Explain different types of pump used in HPLC.

    (c)   Describe physical properties of ion-exchange resins. Give applications of ion exchange chromatography.

    (d)   Explain factors influencing HPTLC separation.

    (e)   Explain common coating materials used in TLC. Discuss about Stahl's Triangle.

    (f)   Describe Soxhlet extraction process.

CJ—47—2019

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

B.Pharmacy (VI Semester) EXAMINATION
MAY/JUNE, 2019

CHEMISTRY OF NATURAL PRODUCTS

(Monday, 6-5-2019)   CBPH—66   Time : 10.00 a.m. to 12.00 noon

Time—Two Hours   *Maximum Marks—50*

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

(ii) Figures to the right indicate full marks.

(iii) Draw a neat labelled diagram wherever necessary.

1. Answer the following (any *five*) :   5×2=10

   (a) Give the significance of Vitali-Morin reaction.

   (b) Draw a structure of Atropine and quinine.

   (c) Write chemical constituents and synonyms of pilocarpus.

   (d) Write the adulterants and substituents of Belladona.

   (e) Give isoprene rule for terpenoids.

   (f) Give physical properties of α and β carotenes.

   (g) Give the biological source and chemical test for Nux-vomica.

2. Answer the following (any *four*) :   4×3=12

   (a) Write a brief note on ergot life cycle.

   (b) Give synonyms, biological source and uses of physostigma.

   (c) Give the biological source, chemical constituents and uses of Kurchi bark.

   (d) Describe the commercial varieties of opium.

   (e) Differentiate between microscopic characteristics of vinca leaf and datura leaf.

   (f) Give the chemistry of sennosides.

P.T.O.

3. Answer the following (any *four*) : 4×7=28

(a) Outline the structural elucidation of β-carotene.

(b) Explain chemistry of citral.

(c) Give the pharmacognostic account of cinchona.

(d) Give the biological source, chemical constituents and uses of :

    (i) Lobelia

    (ii) Ipecac.

(e) Explain biogenesis of Ephedrine.

(f) Explain the chemistry and pharmacological activity of morphine.

CJ—54—2019

FACULTY OF PHARMEUTICAL SCIENCES

B.Pharmacy (Sixth Semester) EXAMINATION

APRIL/MAY, 2019

(BPH-67)

BIOTECHNOLOGY OF PHARMACENTICAL PRODUCTS

(Wednesday, 8-5-2019)   **Time : 10.00 a.m. to 12.00 noon**

Time— Two Hours   *Maximum Marks—50*

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

      (*ii*) Draw a neat diagram wherever necessary.

1.   Solve any *five* of the following :   5×2=10

    (*a*)   What is genomic library ?

    (*b*)   Give biological significance of DNA.

    (*c*)   What is Scale-up fermentation ?

    (*d*)   Give list featueres of genetic code.

    (*e*)   Give names of purine and Pyrimidine derivatives.

    (*f*)   Define Vector and gene ?

    (*g*)   Give applications of PCR in *r*-DNA technology.

2.   Solve any four of the following :   4×3=12

    (*a*)   Explain production of penicillin by fermentation process.

    (*b*)   Differentiate between batch and continoues fermentation process.

    (*c*)   Give applications of Biotechnology.

    (*d*)   Discuss C-DNA library Synthesis.

    (*e*)   What is restriction endonucleases ? Give its types and Nomenclature.

    (*f*)   What is enzyme immobilisation ? Give its application.

                                        P.T.O.

3. Solve any four of the following : 7×4=28

    (a)   Explain in detail primary and secondary screening.

    (b)   Explain in detail protein synthesis.

    (c)   Discuss in detail PCR technique and give its applications.

    (d)   What is vector ? Give properties of good vector.

    (e)   Explain in detail applications of R-DNA technology.

    (f)   Explain production of Vit. B_{12} and Penicillin by fermentation process.

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CJ—60—2019

FACULTY OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

B Pharm. (Third Year) (Sixth Semester) EXAMINATION

APRIL/MAY, 2019

LAWS GOVERNING TRADE AND COMMERCE AND PHARMACEUTICALS

(Saturday, 11-5-2019)   CBPH-68)   Time : 10.00 a.m. to 12.00 noon

Time—2 Hours   Maximum Marks—50

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

(ii)   Answer to the point only.

1.   Solve any *five* of the following :   5×2=10

(a)   Give the objectives of Pharmacy Act, 1948.

(b)   Define Misbranded Drug.

(c)   Define Coca Derivative.

(d)   Give the formula to calculate the retail price of formulation.

(e)   Name any eight diseases or ailments of which no advertisement should be made to claim its cure as per Drugs and Magic Remedies Act.

(f)   Give the functions of state pharmacy council.

(g)   Give the functions of central drug laboratory.

2.   Solve any *four* of the following :   4×3=12

(a)   What are Eduction Regulations ? Give any *two* such regulation as per the Act.

(b)   Give any *three* powers of a Drug Inspector appointed under Drug and cosmetic Act.

(c)   Give classes of advertisement of drugs which are prohibited under Drug and Magic Remedies Act.

P.T.O.

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(d) Define Trademark and Industrial Design.

(e) Give the offence and punishment for contravention in relation to poppy or opium as per ND and PS Act.

(f) Describe Drug Price Equalization Account under D.P.C.O.

3. Solve any *four* of the following : 4×7=28

(a) Give the constitution and functions of central council.

(b) Give the procedure to be followed by Government Analyst on receipt of samples as per D and C Act.

(c) What classes of advertisement are exempted from the provisions of Drug and Magic Remedies Act.

(d) Which operations are totally prohibited under ND and PS Act.

(e) What are the objectives and Drug price control order ? Define Dealer Distributor and Retailer under DPCO.

(f) Give the procedure for preparation of 1st register as per pharmacy Act, 1948.

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