CZ—7—2018

FACULTY OF PHARMACEUTICAL SCIENCE
B.Pharm. (Sixth Semester) EXAMINATION
MARCH/APRIL, 2018
DOSAGE FORM DESIGN—II
(Pharmaceutical Technology—I)

(BPH-61)

(Saturday, 21-4-2018)   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.

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

   (*a*)   Give *two* example of antioxidants and preservatives.

   (*b*)   Define solution and suspension.

   (*c*)   Enlist identification tests for emulsion.

   (*d*)   What are ideal properties for vehicle of injection ?

   (*e*)   Why stocks law not applicable to flocculated suspension ?

   (*f*)   Define emulsifying and suspending agents.

   (*g*)   Enlist different routes of administration for parenteral route.

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

   (*a*)   Give advantages and disadvantages of suspension dosage form.

   (*b*)   Explain rheology of suspension.

   (*c*)   Give formulation of non-aqueous solution.

   (*d*)   Describe different ointment bases.

   (*e*)   Explain theory of emulsification.

   (*f*)   Describe Intrathecal and Intramuscular route of administration parenteral products.

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

    (*a*)   Give advantages and disadvantages of emulsion with example.

    (*b*)   Write about formulation of injection.

    (*c*)   Write about advantages, disadvantages and formulation of oral solutions.

    (*d*)   Write about stability testing of suspension.

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

    (*f*)   Explain factors affecting formulation of suspension.

This question paper contains **2** printed pages]

CZ—15—2018

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

B.Pharm. (Sixth Semester) EXAMINATION

MARCH/APRIL, 2018

PHARMACEUTICAL TECHNOLOGY—II

(DFM-II)

(Tuesday, 24-4-2018)   Time : 10.00 a.m. to 12.00 noon

Time—2 Hours   *Maximum Marks—50*

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

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

     (*iii*) Figures to the right indicate full marks.

     (*iv*) Answer to the point only.

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

    (*a*) Give the pharmaceutical applications of suspensions.

    (*b*) What is weight/ml in solutions ?

    (*c*) State the Bancraft rule.

    (*d*) Define SVP and LVP.

    (*e*) Give the working principle of Homogeniser.

    (*f*) What is defloculated suspension ?

    (*g*) What is class 100 area ?

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

    (*a*) Explain the reasons of crystal growth in suspension.

    (*b*) Give the construction and working of colloidal mill.

    (*c*) Write a short note on dry syrup.

    (*d*) Describe in short about personnel in parenteral technology.

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(e) Give the importance of particle size and particle size distribution in suspension stability.

(f) Explain any *two* identification tests of emulsion.

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

(a) Explain about environmental control in parenteral technology.

(b) What is zeta potential ? Explain the role of free energy curve in the stability of suspension.

(c) Explain the effect of the following common stresses in solutions :

(i) pH

(ii) Viscosity

(iii) Temperature.

(d) Explain any *two* evaluation tests for physical stability of an emulsion.

(e) Explain the effect of the following stresses on emulsion stability :

(i) Temperature change

(ii) Timing

(iii) Agitation.

(f) Explain the pharmaceutical applications of suspensions.

This question paper contains **3** printed pages]

CZ—23—2018

FACULTY OF PHARMACEUTICAL SCIENCES

B.Pharm. (VI Semester) EXAMINATION

MARCH/APRIL, 2018

MEDICINAL CHEMISTRY-II

(Thursday, 26-04-2018)   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.

1.   Solve any *five* of the following :   5×2=10
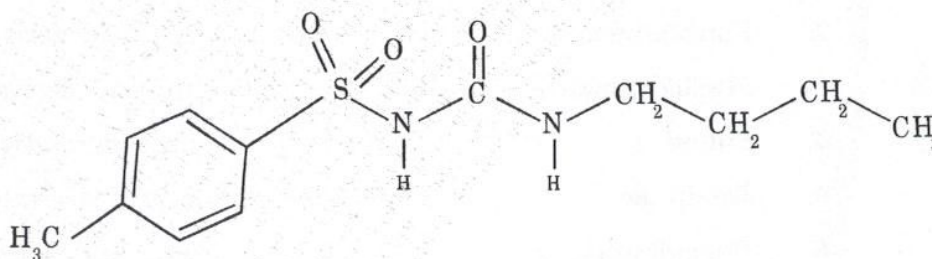
(*a*)   Draw structure and give IUPAC name of phenformin.

(*b*)   Give reason : Aspirin is used as cardioprotective agent.

(*c*)   Write classification of antianginal agents with example.

(*d*)   Write applications of prostaglandins.

(*e*)   Identify and write the chemical class of the following medicinal compound :

(*f*)   Match the following pairs :

Basic Ring		No. of Carbon atoms	
1.	Gonane	(*a*)	27
2.	Pregnane	(*b*)	19

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3. Cholestane (c) 18
4. Androstane (d) 21
(e) 17

(g) Write True/False :

(i) Warfarin is coumarin derivative

(ii) Vit. K supports process of coagulation.

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

(a) Give reason : DES shows estrogenic activity.

(b) Write mechanism of action of organic nitrates as an antianginal agent.

(c) Write classification of antidiabetic agents with examples.

(d) How to synthesise nifedipine chemically.

(e) Write SAR of salicyclic acid derivatives.

(f) Match the following pairs :

Name of Drugs		Chemical Class	
1.	Indomethacin	(a)	Salicylic acid derivative
2.	Flurbiprofen	(b)	Indene acetic acid derivative
3.	Meclofenamate	(c)	Indole acetic acid derivative
4.	Sulindac	(d)	Propanoic acid derivative
5.	Zomipirac	(e)	Anthranilic acid derivative
6.	Phenylbutazone	(f)	Purrole acetic acid derivative
		(e)	Pyrazolidine dione derivative

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

(a) Discuss SAR of glucocorticoids.

(b) Write chemical synthesis of Verapamil and Mexiletine.

(c) Write classification of antihypertensive agents with structure of at least *one* drug from each class.

(d) Discuss SAR of prostaglandins.

(e) Write mechanism of action of :

(i) acetazolamide

(ii) Cardiotonics.

(f) Attempt the following :

(i) Draw structure and write its IUPAC name :

(a) Hydrochlorthiazide

(b) Progesterone.

(ii) Write in short about contraceptive pills.

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CZ—31—2018

FACULTY OF PHARMACEUTICAL SCIENCES

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

MARCH/APRIL, 2018

CHEMOTHERAPY OF ANTI-INFECTIVE AND NEOPLASTIC DISEASES

(Saturday, 28-4-2018)   Time : 10.00 a.m. to 12.00 noon

Time—2 Hours   *Maximum Marks—50*

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

(*ii*)   Draw neat labelled diagrams whenever necessary.

(*iii*)   Figures to the right indicate full marks.

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

(*a*)   What are anti-leprotic agents ?

(*b*)   Define Bacteriostatic and Bactericidal.

(*c*)   Give the therapeutic uses of the following :

(*i*)   Arithromycin

(*ii*)   Amphotericin.

(*d*)   Define Neoplasia. Give its types.

(*e*)   Write therapeutic uses of tetracycline.

(*f*)   Define chemotherapy.

(*g*)   Write the mechanism of action of co-trimoxazole.

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

(*a*)   Classify anti-viral agents with suitable example.

(*b*)   Give the pharmacotherapy for urinary tract infections.

(*c*)   Write factors to be considered in the chemotherapy of malignancy.

(*d*)   Write the mechanism of action and therapeutic uses of chloramphenicol.

(*e*)   Write the mechanism of action and therapeutic uses of fluroquinolins.

(*f*)   Classify sulfonamides according to therapeutic uses.

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

    (*a*) Classify antimalarial agents. Write pharmacology of chloroquine.

    (*b*) Define Leprosy. Write pharmacology of Dapsone.

    (*c*) Classify penicillin according to their spectrum of activity. Write pharmacology of penicillin.

    (*d*) Define and classify antineoplastic agent. Write the pharmacology of Alkylating agent.

    (*e*) Write the pharmacology of macrolides.

    (*f*) Write the general principles of the chemotherapy.

CZ—39—2018

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY
B.Pharm (Third Year) (Sixth Semester) EXAMINATION
MAY/JUNE, 2018
SEPARATION TECHNIQUES

(Thursday, 3-5-2018)   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 questions asked.

   (iii)   Draw neat labelled diagram wherever necessary.

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

   (a)   How is choice of chromatographic method made ?

   (b)   What do you mean by back extraction ?

   (c)   State the principle of paper chromatography.

   (d)   Write the advantages of thin layer chromatography.

   (e)   What is ion-exchange capacity ?

   (f)   Gel chromatography is also called as "size exclusion chromatography", Justify.

   (g)   What do you mean by reversed phase chromatography ?

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

   (a)   Describe various physical properties of ion-exchange resin.

   (b)   Write the various applications of HPLC.

   (c)   Explain factors affecting on column efficiency.

   (d)   Give the classification of gels used in chromatography.

   (e)   Describe different separation technique used in chromatography.

   (f)   What are various steps involved in extraction ?

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

(a) Explain principle and procedure of counter current distribution techniques.

(b) Write the construction and working of GC instrument.

(c) Explain various steps involved in HPTLC.

(d) Write in detail about various development techniques used in TLC.

(e) Discuss operational procedure of paper chromatography.

(f) Draw a neat labelled diagram of HPLC and comment on the following terms :

(i) Reciprocating pump

(ii) RI detector

(iii) C-18 column.

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CZ—47—2018

FACULTY OF PHARMACEUTICAL SCIENCES

B. Pharma. (Sixth Semester) EXAMINATION

MAY/JUNE, 2018

CHEMISTRY OF NATURAL PRODUCTS

BPH-66

(Monday, 7-5-2018)   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.

(*iii*)   Draw a diagram wherever necessary.

(*iv*)   Figures to the right indicate full marks.

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

(*a*)   Define primary metabolites and secondary metabolites.

(*b*)   Draw a well labelled diagram of transverse section of vinca.

(*c*)   Give the structural features of terpenoids.

(*d*)   Draw schematic representation of ergot life cycle.

(*e*)   Differentiate between β-carotene and α-carotene.

(*f*)   Give cultivation method of ephedra.

(*g*)   Give biological source and uses of coffee.

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

(*a*)   Give biological source, chemical constituents and uses of colchicum.

(*b*)   Draw chemical structure of :

(*i*)   Digitoxin

(*ii*)   Sennoside

(*iii*)   Ephedrine

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(c) Give biological source, chemical constituents and uses of nux-vomica.

(d) Discuss microscopic characters of Datura.

(e) Give the biological source, chemical constituents and uses of cinchona.

(f) Give the biological source morphology and uses of Hyoscyamus.

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

(a) Explain chemistry of citral.

(b) Give pharmacognostic account of Rauwolfia.

(c) Give the biosynthetic pathway for Digitoxin.

(d) Write pharmacognostic account of Belladona.

(e) Give biological source, chemical constituents and uses of opium and Ipecac.

(f) Give pharmacognostic account of Kurchi.

CZ—54—2018
FACULTY OF PHARMACY
B.Pharm (Sixth Semester) EXAMINATION
MAY/JUNE, 2018
BIOTECHNOLOGY OF PHARMACEUTICAL PRODUCTS
(BPH-67)

(Friday, 11-5-2018)   **Time : 10.00 a.m. to 12.00 p.m.**

Time—2 Hours   *Maximum Marks—50*

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

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

       (iii)   Figures to the right indicate full marks.

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

    (a)   Define fermentation.

    (b)   Draw a well labelled diagram of reactor.

    (c)   What in enzyme immobilization ?

    (d)   Enlist the screening technique.

    (e)   What is bacteriophage ?

    (f)   What is DNA ?

    (g)   Give the applications of r-DNA technology.

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

    (a)   Give an account of importance of enzyme immobilization.

    (b)   Give production of Tetracycline.

    (c)   Define gene. Give its functions.

    (d)   Give the properties of good vector.

    (e)   Explain in brief genomic library.

    (f)   Give the types and nomenclature of restriction endonucleases.

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

　(*a*)　Discuss polymerase chain reaction with its application.

　(*b*)　Explain terms :

　　　(*a*)　Media composition

　　　(*b*)　Media sterilization.

　(*c*)　What is recombinent DNA technology ? Explain production of insulin with the help of r-DNA technology.

　(*d*)　Give the production of Vit-B$_2$ and Vit-B$_{12}$.

　(*e*)　Explain major steps involved in protein systhesis.

　(*f*)　Explain in detail gene regulation.

CZ—60—2018

FACULTY OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

B.Pharmacy (Third Year) (Sixth Semester) EXAMINATION
MAY/JUNE, 2018

LAWS GOVERNING TRADE AND COMMERCE OF PHARMACEUTICALS

(Tuesday, 15-5-2018)   Time : 10.00 a.m. to 12.00 noon

Time—Two Hours   *Maximum Marks—50*

N.B. :—   (*i*)   Answer to the point only.

       (*ii*)   *All* questions are compulsory.

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

     (*a*)   Define :

         (*i*)   Medical practioner

         (*ii*)   Chemist

     (*b*)   Give the formula for calculation of retail price of formulation.

     (*c*)   For what following schedules are used :

         (*i*)   Schedule 'H'

         (*ii*)   Schedule 'B'

         (*iii*)   Schedule 'Y'

         (*iv*)   Schedule 'N'

     (*d*)   Write objectives of Narcotic drugs and psychotropic substance act 1985.

     (*e*)   What is canabis ?

     (*f*)   Give the 4 names of diseases as per schedule of drugs and magic remedies act 1954.

     (*g*)   Enlist types of patent.

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

   (a) Discuss about preindependence picture of pharmacy in India.

   (b) Write about state pharmacy council.

   (c) How to fix ceiling price of a formulation ?

   (d) Discuss classes of exempted advertisement under drug and magic remedies act 1954.

   (e) Give the conditions required for blood bank under D and C Act 1940.

   (f) What are authorities given to the officers for narcotic drugs.

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

   (a) Explain in brief about manufacture of cosmetics for sale in D and C Act 1940.

   (b) Describe in detail about pharmacy council of India.

   (c) Write in detail about offences and penalties of Narcotic drugs and psychotropic substances act 1985.

   (d) Discuss in brief about drug inspector.

   (e) Explain in detail about schedule 'M'.

   (f) Write in brief about "Patent" in Patent Act 1970.

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