Code No. SLR-G – 1

Seat No.	

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Seat No. ________ Centre ________	For Office Use Only
Seat No. in words ________	Code No.

B.Pharmacy (Semester – I) Examination, 2014
PHARMACEUTICS – I

Day and Date : Monday, 12-5-2014 **Time : 10.00 a.m. to 1.00 p.m.** **Max. Marks : 80**

Day & Date ________	Language of Answer ________
Examination ________	Paper No. ________
Subject ________	Section ________

Marks -	Out of
Signature of Examiner	

________ Examination ________

________ (Paper - ________)

For Office Use only
Code No.

MCQ/Objective Type Question Paper

Marks : 16

1. MCQ **(1×16=16)**

   1) TQM stands for ________
      a) Total Quantity Management
      b) Total Quality Management
      c) Total Qualification Management
      d) None of above

P.T.O.

2) _____ is determined by angle of repose in preformulation.

a) Bulk density ☐ b) Flow properties ☐

c) Particle size ☐ d) Both b) and c) ☐

3) In Ayurvedic liquid preparation arkayantra is used for _____

a) Distillation ☐ b) Size reduction ☐

c) Size separation ☐ d) None of above ☐

4) Poultice are _____ dosage forms

a) Solid ☐ b) Liquid ☐

c) Semisolid ☐ d) Both a) and b) ☐

5) In _____ year use of imperical system was abolished.

a) 1968 ☐ b) 1948 ☐

c) 1945 ☐ d) 1951 ☐

6) Indian pharmacopoeia third edition was reconstituted under the Chairmenship of _____

a) Dr. Nitya Nand ☐ b) Dr. B. N. Ghosh ☐

c) Co L Sir R. N. Chopra ☐ d) None of above ☐

7) _____ a branch of Ayurveda concerned with nutrition of child and cure of diseases of childhood.

a) Salya ☐ b) Shalakya ☐

c) Kaumarabhritya ☐ d) None of these ☐

8) "Let likes be treated by likes" is basic principle _____ medicine.

a) Ayurvedic ☐ b) Homoeopathy ☐

c) Unani Tibb ☐ d) Siddha ☐

9) _____ is used to increase flow properties of granules.

a) Binder ☐ b) Disintegrants ☐

c) Diluent ☐ d) Glidents ☐

10) Materia medica is wrote by _____

a) Claudius Galen ☐ b) Hippocrate ☐

c) Dioscorides ☐ d) None of above ☐

11) _____ is dispensed in coloured fluted bottles τ label for external use only and shake well before use.

a) Jellies ☐ b) Lotion ☐

c) Elxirs ☐ d) Liniments ☐

12) Lozenges are solid dosage forms ment for _____ use.

a) External ☐ b) Internal ☐

c) Topical ☐ d) None of above ☐

13) Syrup NF contains _____ gns of sucrose and sufficient purified water to make difre

a) 850 ☐ b) 950 ☐

c) 1000 ☐ d) 750 ☐

14) Spirits are _____ preparations of volatile substances containing 50% or 90% alcohol.

a) Aqueous ☐ b) Alcoholic ☐

c) Hydro alcoholic ☐ d) Both b) and c) ☐

15) Draughts are _____ dosage forms

a) Solid ☐ b) Liquid ☐

c) Semisolid ☐ d) None of above ☐

16) Since 1948, the revision of BP was after every _____ years.

a) Four ☐ b) Five ☐

c) Six ☐ d) Seven ☐

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SLR-G – 1

Seat No.	

B. Pharmacy (Semester – I) Examination, 2014
PHARMACEUTICS – I

Day and Date : Monday, 12-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – I

2. Answer **any four** : **(4×4=16)**

   1) Explain briefly about British pharmacopoeia.

   2) Define and classify elixir. Write its official preparations.

   3) Briefly explain following preformulation parameters :

      a) Microscopy

      b) Particle size

      c) Hygroscopicity

      d) Portion coefficient

   4) What is Batch manufacturing record as per GMP ?

   5) Discuss about Unani system of medicine.

   6) Explain evaluation of pharmacy as a profession.

3. Answer the following : **(8×2=16)**

   1) Explain in detail about Homoeopathy alternative medicine system with different principles.

   2) What is monograph ? Add note on Indian pharmacopoeia (1985) and Indian Pharmaceutical codex 1963 (IPC, 53).

      OR

      Write in dail classification of dosage forms.

SECTION – II

4. Answer **any four** : **(4×4=16)**

   1) Enumerate advantages and disadvantages of solutions.

   2) Distinguish between quality assurance and quality control as per GMP.

   3) Write a note on Glycerites.

   4) Discuss briefly about (DSP) united state pharmacopoeia.

   5) Explain distilled water and water for injection.

   6) Define the terms :
      a) Spirits
      b) Syrups
      c) Tablet
      d) Pure water.

5. Answer the following : **(8×2=16)**

   1) Discuss in detail about Elixirs classification, method of preparation and official preparations.

   2) Explain Ayurvedic dosage from with its branches and add note one tridosa theory of Ayurveda.

      OR

      Explain in detail Aromatic wakes and add note on Glycerites.

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Code No. SLR-G – 10

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B.Pharm. (Semester – II) Examination, 2014
ANATOMY, PHYSIOLOGY AND HEALTH EDUCATION – II

Day and Date : Saturday, 24-5-2014 **Time : 10.00 a.m to 1.00 p.m.** **Max. Marks : 80**

Day & Date _____	Language of Answer _____
Examination _____	Paper No. _____
Subject _____	Section _____

Marks -	Out of
Signature of Examiner	

_____ Examination _____

_____ (Paper - _____)

For Office Use only
Code No.

MCQ/Objective Type Questions

Marks : 16

1. Multiple choice questions : **(16×1=16)**

   1) Area 41 and 42 in cerebrum are known as

   a) Primary auditory area ☐ b) Gnostic area ☐

   c) Visual association area ☐ d) Motor speech area ☐

P.T.O.

2) Large fluid filled follicles that rupture and expel secondary oocytes are called as
   a) Ovarian follicles ☐ b) Graafian follicles ☐
   c) Dense follicles ☐ d) Corpus luteum ☐

3) Blind spot in eye is a synonym for
   a) Sclera ☐ b) Choroid ☐
   c) Optic disc ☐ d) Macula lutea ☐

4) Production of no urine is termed as
   a) Anurea ☐ b) Oligourea ☐
   c) Polyurea ☐ d) Glycosurea ☐

5) H-zone of skeletal muscle consists
   a) Only thin filament ☐
   b) Only thick filament ☐
   c) Both thick and thin filament ☐
   d) Thin filament and Z disc ☐

6) Which of the following hormone is secreted by adrenal medulla ?
   a) Aldosterone ☐ b) Cortisol ☐
   c) Epinephrin ☐ d) DHEA ☐

7) Which of the following is NOT a physical barrier technique for birth control ?
   a) Condom ☐ b) Diaphragm ☐
   c) Copper-T ☐ d) Cervical cup ☐

8) Rubella is also known as _____

a) German measles ☐ b) Lockjaws ☐

c) Marsh fever ☐ d) Dumdum fever ☐

9) The position of kidneys is described by term

a) Abdominal ☐ b) Mediastenal ☐

c) Peritoneal ☐ d) Retro-peritoneal ☐

10) Somatostatin is secreted by _____ cells of pancreas.

a) Alpha ☐ b) Beta ☐

c) Gamma ☐ d) Delta ☐

11) Lifespan of a gustatory receptor is approximately _____

a) 10 years ☐ b) 10 months ☐

c) 10 days ☐ d) 10 hours ☐

12) pH of semen is _____

a) 3.4 – 4.7 ☐ b) 5.8 – 6.1 ☐

c) 7.2. – 7.7 ☐ d) 9.2 – 10.3 ☐

13) Secondary anemia is a symptom of

a) AIDS ☐ b) Cholera ☐

c) Malaria ☐ d) Influenza ☐

14) Synonym for Cranial nerve V (5) is

a) Trigeminal ☐ b) Abducens ☐

c) Facial ☐ d) Vestibulocochlear ☐

15) Which of the following is not a symptom of diabetes mellitus ?

a) Alopecia ☐ b) Poly urea ☐

c) Polydipsia ☐ d) Polyphagia ☐

16) Hypothyroidism during adulthood results in _____

a) Grave's disease ☐ b) Myxedema ☐

c) Goiter ☐ d) Cretinism ☐

_____

SLR-G – 10

Seat No.	

B.Pharm. (Semester – II) Examination, 2014
ANATOMY, PHYSIOLOGY AND HEALTH EDUCATION – II

Day and Date : Saturday, 24-5-2014 Marks : 64
Time : 10.00 a.m to 1.00 p.m.

SECTION – I

2. Attempt **any four** of the following questions : **(4×4=16)**

   1) Explain physiology of auditory sensation.

   2) Describe the anatomy of neuron.

   3) Draw a neat labeled diagram of skin.

   4) Explain the concept of health. Describe the objectives of health education.

   5) Draw a neat labeled diagram of nephron.

   6) Write a note on sex hormones in male and female.

3. Answer the following questions : **(2×8=16)**

   1) Explain Renin-Angiotensin-Aldosterone pathway in detail.

   2) Differentiate between sympathetic and parasympathetic nervous system.

   OR

   2) Give detailed anatomy of male reproductive system.

SECTION – II

4 .Answer **any four** of the following questions : **(4×4=16)**

1) Give causative organism, mode of transmission, symptoms and prevention of influenza and tetanus.

2) Give anatomy of cerebrum.

3) Describe histology of skeletal muscles.

4) Write on secretions of thyroid and parathyroid glands.

5) Write a note on cancer.

6) Classify family planning techniques. Write on chemical methods.

5. Answer the following questions : **(2×8=16)**

1) Explain in detail AIDS and hepatitis.

2) Write a note on functions of anterior pituitary gland.

OR

2) Describe the anatomy of eye.

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Code No. **SLR-G – 11**

Seat No.	

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B.Pharm. (Semester – III) Examination, 2014
PHYSICAL PHARMACY – I

Day and Date : Monday, 12-5-2014 **Time : 3.00 p.m. to 6.00 p.m.** **Total Marks : 80**

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

________ Examination ________

________ (Paper - ______)

For Office Use only
Code No.

Instructions : *1)* ***All*** *questions are* ***compulsory****.*
2) Figures to ***right*** *indicate* ***full*** *marks.*

MCQ/Objective Question Paper

Marks : 16

I. Choose the appropriate answer from the following choices. **(1×16=16)**

1) The phase rule was first discovered by
   a) Nernst ☐ b) Gibbs ☐
   c) Arrhenius ☐ d) Le Chatelier ☐

2) The occurrence of the same substance in more than one crystalline form is known as
   a) isomerism ☐ b) racemisation ☐
   c) polymorphism ☐ d) none of these ☐

P.T.O.

3) For the study of distribution law the two solvents should be

a) miscible ☐ b) non-miscible ☐

c) volatile ☐ d) reacting with each other ☐

4) When the solute undergoes association in one of the solvent, the Nernst distribution law is modified as ?

a) $C_1 = \sqrt{C_2} \times K_D$ ☐ b) $\sqrt{C_2} = C_1 \times K_D$ ☐

c) $C_1 = K_D \times C_2^2$ ☐ d) $C_1 = K_D \times C_2^3$ ☐

5) A hypertonic solution is the one which has _____ osmotic pressure than the other.

a) lower ☐ b) equal ☐

c) higher ☐ d) none of these ☐

6) Which of the following is a colligative property ?

a) atmospheric pressure ☐ b) critical pressure ☐

c) osmotic pressure ☐ d) none of these ☐

7) A semipermeable membrane allows the passage of _____ through it.

a) Solvent only ☐ b) Solute only ☐

c) Solvent and solute both ☐ d) Either solvent or solute ☐

8) The Van't Hoff equation for 'n' moles of solute dissolved in 'v' litres of solution is _____

a) $\pi = nRT$ ☐ b) $\pi P = nRT$ ☐

c) $\pi P = nRT/V$ ☐ d) $\pi V = nRT$ ☐

9) A liquid boils when its vapour pressure becomes equal to
   a) one atmospheric pressure
   b) zero
   c) very high
   d) very low

10) A real solution is that which
   a) obeys Raoult's law b) does not obey Raoult's law
   c) obeys Henry's law d) does not obey Henry's law

11) The solubility generally rises with _____
   a) increase in temperature
   b) decrease in temperature
   c) increase in volume of the solvent
   d) none of these

12) When two non-reacting gases are mixed, a _____ is obtained.
   a) heterogenous mixture b) homogeneous mixture
   c) equilibrium mixture d) none of these

13) A crystalline solid has _____
   a) definite geometrical shape
   b) flat faces
   c) sharp edges
   d) all of these

14) In general, the viscosity _____ with temperature.
   a) decreases b) increases
   c) remains the same d) none of these

15) The entropy of a pure crystal is zero at absolute zero. This is statement of _____
   a) first law of thermodynamics
   b) second law of thermodynamics
   c) third law of thermodynamics
   d) none of these

16) Which out of the following is not on intensive property ?
   a) pressure b) concentration
   c) density d) volume

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SLR-G – 11

Seat No.	

B.Pharm. (Semester – III) Examination, 2014
PHYSICAL PHARMACY – I

Day and Date : Monday, 12-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

***Instructions** : 1) **All** questions are **compulsory**.*
*2) Figures to **right** indicate **full** marks.*

SECTION – I

II. Answer **any four** : **16**

1) What is a crystal ? Mention various crystal systems.

2) Discuss in detail polymorphism.

3) Define and classify surfactant based on HLB. Give their pharmaceutical applications.

4) Describe the method for measuring of osmotic pressure with a labelled diagram.

5) Explain various thermodynamic process with suitable examples.

6) Differentiate between ideal and real solution.

III. Answer the following : **16**

1) State and explain the first law of thermodynamics. Derive an expression for the maximum work done when an ideal gas expands isothermally and reversibly.

2) Describe with examples vapour pressure-composition curve of binary mixtures for fractional distillation.

OR

2) State and explain Raoult's law for vapour pressure lowering. Prove that osmotic pressure is a colligative properly.

SECTION – II

IV. Answer **any four** : **16**

1) Draw and discuss the flow diagrams for Newtonian and Non-Newtonian types of flow.
2) Explain the phase diagram for one component water system.
3) What is viscosity ? Explain factors affecting viscosity.
4) Describe the principle and working of cone and plate viscometer.
5) Write a note on Eutectic mixtures and amorphous solids.
6) Explain factors influencing solubility of drugs.

V. Answer the following : **16**

1) Describe the method of determining solubility of solids in liquids.
2) Define Newtonian and non-Newtonian rheological systems. Give an account of “thixotropy in formulations”.

OR

2) What is partition coefficient ? State thermodynamic deduction of partition law. How partition coefficient of drug is determined ? Give limitations of partition law ?

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Seat No. ____________ Centre ____________	For Office Use Only
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B.Pharmacy (Semester – III) Examination, 2014
PHARMACEUTICAL ENGINEERING

Day and Date : Thursday, 15-5-2014 Time : 3.00 p.m. to 6.00 p.m. Total Marks : 80

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

________ Examination ________

____________ (Paper - ________)

For Office Use only
Code No.

MCQ/ Objective Type Question Paper

Marks : 16

SECTION – A

1. Multiple choice questions : **(1×16=16)**

1) The energy possessed by the body by virtue of its position is known as ____________

a) Pressure energy ☐ b) Potential energy ☐

c) Kinetic energy ☐ d) None of the above ☐

P.T.O.

2) In which feed method, the feed is directly fed to each of the three effects is _____

a) Mixed feed method ☐
b) Forward feed method ☐
c) Backward feed method ☐
d) Parallel feed method ☐

3) _____ solution distills unchanged at constant temperature.

a) Azeotropic ☐
b) Zeotropic ☐
c) Both a) and (b) ☐
d) None of the above ☐

4) The flow in open channel is laminar if the Reynold's number is

a) < 2000 ☐
b) > 4000 ☐
c) Lies in between 2000 to 4000 ☐
d) None of the above ☐

5) _____ process gives concentrated liquid residue.

a) Drying ☐ b) Crystallization ☐
c) Evaporation ☐ d) Distillation ☐

6) _____ is an excellent material for the construction of kettle ?

a) Iron ☐ b) Copper ☐

c) Stainless steel ☐ d) Aluminum ☐

7) Which conveyor is used for handling of toxic materials ?

a) Pneumatic ☐ b) Screw ☐

c) Belt ☐ d) Chain ☐

8) Liquid boils when its vapour pressure is _____

a) Less than atmospheric pressure ☐

b) More than atmospheric pressure ☐

c) Equal to atmospheric pressure ☐

d) None of these ☐

9) Spray dryer is based on which mechanism

a) Pneumatic dryer ☐

b) Static bed dryer ☐

c) Fluidised bed dryer ☐

d) Moving bed dryer ☐

10) Which distillation is used for the separation of high-boiling substances from non-volatile impurities.

a) Rectification ☐

b) Simple distillation ☐

c) Steam distillation ☐

d) None of the above ☐

11) In a system, if the operating conditions do not vary with time, a system is said to be _____

a) Transient ☐ b) Unsteady ☐

c) Both a) and b) ☐ d) Steady ☐

12) Which method is depending on relative volatility of component ?

a) Evaporation ☐ b) Drying ☐

c) Distillation ☐ d) None of these ☐

13) Manometer is a device used for measuring _____

a) Velocity at a point in a fluid ☐

b) Pressure at a point in a fluid ☐

c) Discharge of fluid ☐

d) None of the above ☐

14) In which evaporator the preheated feed enters.

a) Rising film ☐ b) Falling film ☐

c) Evaporating pan ☐ d) Horizontal tube ☐

15) The minimum water held by the material that exerts an equilibrium vapour pressure less than the pure water is _____

a) Bound water ☐ b) Unbound water ☐

c) Sorption ☐ d) Desorption ☐

16) In which process the direct change of water from solid into vapour without conversion to a liquid phase.

a) Condensation ☐ b) Sublimation ☐

c) Evaporation ☐ d) None of the above ☐

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SLR-G – 12

Seat No.	

B.Pharmacy (Semester – III) Examination, 2014
PHARMACEUTICAL ENGINEERING

Day and Date : Thursday, 15-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

SECTION – B

2. Answer **any four** : **(4×4=16)**

   1) What is Pharmaceutical Engineering ? Explain in detail Material and Energy balance.

   2) How will you carry out the conveying of liquid ?

   3) Draw a well labeled diagram of Steam Distillation.

   4) What do you mean by Fluid statics and Fluid dynamic ? Add a not on differential manometer.

   5) Explain in detail factor affecting Evaporation.

   6) Describe the principle and uses of freeze Dryer.

3. Answer the following : **(8×2=16)**

   1) Elaborate the concept of Multiple Effect Evaporators. How do you feed such evaporators ?

   OR

   1) Classify the dryers. Explain in detail principle, construction and working of Fluid Bed dryer.

   2) Differentiate between evaporation and distillation. Explain in detail Flash Distillation with the help of diagram.

SECTION – C

4. Answer **any four** : **(4×4=16)**
   1) Explain in detail principle and working of spray dryer.
   2) Classify Evaporators with example of each class.
   3) Write a note on Fractionating Column.
   4) Classify the Plunger Pump. Explain in general construction and working of Plunger pump.
   5) Derive an expression for Bernoulli's theorem.
   6) Give an exhaustive account of Blowers and compressors.

5. Answer the following : **(8×2=16)**
   1) How will you determine flow rate by using Orifice Meter ? Write principle and application of same.
   2) Classify pumps. Explain in detail Centrifugal pump.

   OR

   2) Explain in detail Mc. Cabe Thiele method for calculation of number of theoretical plates.

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Code No. SLR-G – 13

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B.Pharm. (Semester – III) Examination, 2014
ORGANIC CHEMISTRY – II

Day and Date : Monday, 19- 5-2014 **Time : 3.00 p.m. to 6.00 p.m.** **Total Marks : 80**

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

____________ Examination ____________

____________ (Paper - ________)

For Office Use only
Code No.

MCQ/Objective Type Questions

Marks : 16

1. Multiple choice questions : **(16×1=16)**

   1) ______________ derivative of carboxylic acid is most reactive toward nucleophilic acyl substitution.

      A) Anhydrides ☐ B) Esters ☐

      C) Amides ☐ D) Acid chloride ☐

P.T.O.

2) O-P director functional group is _____

A) –COOH ☐ B) –Br ☐

C) –CN ☐ D) $-COCH_3$ ☐

3) Benzaldehyde reacts with mixture of conc. H_2SO_4 and HNO_3 to give _____

A) p-nitro benzaldehyde ☐ B) o-nitro Benzaldehyde ☐

C) p-nitro benzoic acid ☐ D) m-nitro Benzaldehyde ☐

4) The nitrogen atom in pyridine is _____ hybridized.

A) SP_3 ☐ B) SP_2 ☐

C) SP ☐ D) Cannot predicted ☐

5) Which of the following reagents does not react with aniline ?

A) Acetyl chloride ☐ B) Acetic anhydride ☐

C) Ammonia ☐ D) Nitrous acid ☐

6) _____ will be converted into acetic anhydride when treated with sodium acetate.

A) Acetaldehyde ☐ B) Acetyl chloride ☐

C) Methyl acetate ☐ D) Acetamide ☐

7) How many resonance structures are there for phenanthrene ?

A) 6 ☐ B) 5 ☐

C) 4 ☐ D) 3 ☐

8) _____ is less reactive towards electrophilic aromatic substitution.

A) Nitrobenzene ☐ B) Ethyl benzene ☐

C) Phenol ☐ D) Benzene ☐

9) _____ is most stable acid derivative.

A) Anhydrides ☐ B) Esters ☐

C) Amides ☐ D) Acid chloride ☐

10) _____ is formed when benzamide is treated with bromine in KOH solution.

A) Aniline ☐ B) N-methyl aniline ☐

C) Benzyl amine ☐ D) Toluene ☐

11) When Benzyne reacts with 1, 3 butadiene is called as _____

A) Diels-Alder reaction ☐ B) Elimination ☐

C) Substitution ☐ D) None of above ☐

12) _____ will undergo Aldol condensation.

A) Acetone ☐ B) Benzaldehyde ☐

C) Benzoic acid ☐ D) Benzophenone ☐

13) Anthracene undergoes oxidation with O_2/P_2O_5 at 500°C to give_____

A) Benzoic acid ☐ B) Anthraquinone ☐

C) Phthalic acid ☐ D) Benzophenone ☐

14) _____ forms strongest H-bonds to water molecule.

A) Alcohols ☐ B) Ethers ☐

C) Phenols ☐ D) All of above ☐

15) Aniline reacts with nitrous acid at low temperature to give _____

A) N-nitrosoamine ☐ B) Nitrile ☐

C) Diazonium salt ☐ D) Nitrile salt ☐

16) _____ is aromatic molecule.

A) Benzene ☐ B) Pyridine ☐

C) Naphthalene ☐ D) All of above ☐

_____

SLR-G – 13

Seat No.	

B.Pharm. (Semester – III) Examination, 2014

ORGANIC CHEMISTRY – II

Day and Date : Monday, 19- 5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

SECTION – I

2. Answer **any four** of the following questions : **(4×4=16)**

   1) Give the method of preparation of Phenol.

   2) Write a note on aromaticity.

   3) What happens when pyrrole is treated with

      1) SO_3 in pyridine
      2) Nitric acid in acetic anhydride at-10°C
      3) Benzene diazonium chloride
      4) Bromine in alcohol.

   4) Explain why pyridine is less basic than amine and more basic than pyrrole and aniline.

   5) How will you distinguish between aldehyde and ketone ?

   6) Write a note on benzyne intermediate.

3. Answer the following questions : **(2×8=16)**

   1) Explain in detail Aldol condensation.

   2) Explain the separation of mixture of amine.

      OR

   3) Explain aromatic substitution of – CI on benzene.

SECTION – II

4. Answer **any four** of the following questions : **(4×4=16)**

   1) How benzene is obtained ?
   2) Write a note on Haloform reaction.
   3) Give the reactions of aromatic amines.
   4) Give the reactions of carboxylic acid.
   5) Give a complete account of indole synthesis.
   6) Explain in detail nucleophilic aromatic substitution.

5. Answer the following questions : **(2×8=16)**

   1) Explain in detail why $-NO_2$ is meta director.
   2) Give the mechanism of Cannizzaro's reaction.

      OR

   3) Explain in detail MPV reduction.

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Code No. SLR-G – 14

Seat No.	

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B.Pharmacy (Semester – III) Examination, 2014
PHARMACEUTICAL ANALYSIS – I

Day and Date : Wednesday, 21-5-2014 **Time : 3.00 p.m. to 6.00 p.m.** **Total Marks : 80**

Day & Date _____	**Language of Answer** _____
Examination _____	**Paper No.** _____
Subject _____	**Section** _____

Marks -	Out of
Signature of Examiner	

_____ **Examination** _____

_____ **(Paper -** _____**)**

For Office Use only
Code No.

MCQ/Objective Type Question Paper

Marks : 16

1. Multiple Choice Questions: **16**

1) pH is defined as _____

a) $-\log (H^+)$ ☐ b) $-\log (OH^-)$ ☐

c) pH + POH ☐ d) log POH ☐

2) Acidic pH scale ranges from _____

a) 10 to 14 ☐ b) 7 to 14 ☐

c) 1 to 3 ☐ d) 0 to 7 ☐

P.T.O.

3) Standardization of Iodine is carried out by using _____

a) Oxalic acid ☐ b) Sodium Thiosulphate ☐

c) Perchloric acid ☐ d) None of these ☐

4) In assay of ascorbic acid, the indicator used is _____

a) Phenolphthalein ☐ b) Methyl Red ☐

c) Starch solution ☐ d) $KMnO_4$ ☐

5) 8.5 ml HCL in 1 liter = _____

a) 0.1 M ☐ b) 0.1 N ☐

c) 0.5 M ☐ d) Both a) and b) ☐

6) Basic Dye used in Fajan's method is _____

a) Eosin ☐ b) Rhodamine Series ☐

c) Florescein ☐ d) None of these ☐

7) The tolerance capacity for one mark 10 ml pipette as per I.P is +– _____

a) 0.02 ☐ b) 0.005 ☐

c) 0.01 ☐ d) 0.001 ☐

8) Approx. quantity of sparingly soluble solvent volume for 1 part by weight of solute is _____

a) From 10 to 30 parts ☐ b) From 1000 to 100000 parts ☐

c) From 30 to 100 parts ☐ d) From 1 to 10 parts ☐

9) Determination of end point by formation of colored precipitate is observed in _____

a) Volhard's method ☐ b) Mohr's method ☐

c) Both a) and b) ☐ d) None of these ☐

10) Number of millimoles of solute/milliliter of solution is called _____

a) Molar concentration ☐ b) Molal concentration ☐

c) Formal concentration ☐ d) Normality ☐

11) Ibuprofen powder can be detected by using _____ indicator.

a) Methyl red ☐ b) Methyl orange ☐

c) Phenolphthalein ☐ d) Phenol red ☐

12) In oxidation reduction change in _____ of reacting element takes place.

a) Volume ☐ b) pH ☐

c) Absorbance ☐ d) Valency ☐

13) 20 gm NaOH in 500 ml = _____

a) 0.1 N ☐ b) 1 N ☐

c) 1 M ☐ d) Both b) and c) ☐

14) In precipitation titration, titrant used is _____

a) Silver Nitrate ☐ b) EDTA ☐

c) Sodium Thiosulphate ☐ d) None of these ☐

15) Standardization of 0.1 N NaOH is _____ analysis.

a) Qualitative ☐ b) Quantitative ☐

c) Both a) and b) ☐ d) Gasometric ☐

16) Assay of Isoniazide powder is under _____ titration.

a) Acid-base ☐ b) Precipitation ☐

c) Oxidation-Reduction ☐ d) Non-Aqueous ☐

_____

SLR-G – 14

Seat No.	

B.Pharmacy (Semester – III) Examination, 2014
PHARMACEUTICAL ANALYSIS – I

Day and Date : Wednesday, 21-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

SECTION – I

2. Answer **any four** of the following : **16**

   1) Define accuracy, precision, significant figures, relative errors.

   2) Explain solubility product with example.

   3) Explain preparation and standardization of 0.0167 M potassium bromate solution.

   4) Explain different methods involved in Quantitative Analysis.

   5) How will you calibrate 50 ml burette ?

   6) Write a note on indicators used in oxidation reduction titration.

3. Answer **any two** of the following : **16**

   1) Explain law of mass action. Add a note on principle involved in NaCl injection I.P.

   2) Explain theories of neutralization indicators.

   3) Discuss Mohr's method. Add a note on use of absorption indicators.

SECTION – II

4. Answer **any four** of the following : **16**

   1) Explain Turbidity method.

   2) Define pharmaceutical analysis. Give the importance of pharmaceutical analysis in industry.

3) Write a note on assay of aspirin powder I.P.

4) Define oxidation, reduction, redox potential.

5) Explain primary standard substance.

6) Define and classify errors.

5. Answer **any two** of the following : **16**

1) Explain Neutralization curve for weak acid-strong base and weak base-strong acid.

2) How will you prepare and standardize 250 ml of 0.5 N NaOH ? Give the principle involved in redox titration.

3) Discuss Volhard's method. Add a note on assay of ferrous sulphate powder.

Code No. **SLR-G – 15**

Seat No.	

Signature of Jr. Supervisor

Seat No. ____________ Centre ____________	For Office Use Only
Seat No. in words ____________	Code No.

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Bachelor of Pharmacy (Semester – III) Examination, 2014
PATHOPHYSIOLOGY AND CLINICAL BIOCHEMISTRY – I

Day and Date : Friday, 23-5-2014 Time : 3.00 p.m. to 6.00 p.m. Total Marks : 80

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

____________ Examination ____________

____________ (Paper - ________)

For Office Use only
Code No.

Instructions *: 1)* ***All*** *questions are* ***compulsory****.*
2) Figures to ***right*** *indicate* ***full*** *marks.*

MCQ/Objective Question Paper

Marks : 16

I. Choose the appropriate answer from the following choices : **(1×16=16)**

1) The following pair of organ play major role in maintenance of pH of the blood and body tissues

a) liver and gall bladder ☐ b) stomach and intestine ☐

c) lungs and kidneys ☐ d) brain and muscles ☐

P.T.O.

2) Increased serum calcium level is called as

a) Hyperkalemia ☐ b) Hypocalcaemia ☐

c) Hypernatremia ☐ d) Hypervolaemia ☐

3) 9 Inflammation is a _____ response to injury.

a) Protective ☐ b) Pathological ☐

c) Clinical ☐ d) Bacterial ☐

4) The common cause of peptic ulcer except

a) Alcohol consumption ☐ b) Spicy food ☐

c) NSAID ☐ d) Diarrhea ☐

5) Gout is associated with the increase in _____ level of blood.

a) Uric acid ☐ b) Urea ☐

c) Hippuric acid ☐ d) None ☐

6) The normal sodium concentration in serum is

a) 72 m mol per ltr ☐ b) 142 m mole per ltr ☐

c) 58 m mol per ltr ☐ d) 168 m mol per ltr ☐

7) In atrophy the cell is

a) Dead cells ☐ b) Shrunken cells ☐

c) Irreversibly injured cells ☐ d) Reversibly injured cells ☐

8) Fast pain carries impulse at the velocities between

a) 6 and 30 m/sec. ☐ b) 0.5 and 2 m/sec. ☐

c) both of these ☐ d) none of these ☐

9) The range for the pH in acidosis and alkalosis is _____

a) 0.8 – 3 ☐ b) 2 – 4 ☐

c) 5 – 7 ☐ d) 6.8 – 7.8 ☐

10) The reaction $H_2O + CO_2 = H_2CO_3$ is catalyzed by the enzyme _____

a) alkaline phosphatase ☐ b) carbonic anhydrase ☐

c) dehydrogenase ☐ d) none ☐

11) Titrable acidity is due to excretion of _____

a) NaH_2PO_4 ☐ b) $NaHCO_3$ ☐

c) NaH_2SO_4 ☐ d) HCl ☐

12) Extra cellular fluid contributes _____ of total body water.

a) 45% ☐ b) 55% ☐

c) 65% ☐ d) 60% ☐

13) The most common form of glomuralonephritis in adult is

a) Minimal change glomerulonephritis ☐

b) Membranous glomerulonephritis ☐

c) Membrane proliferate ☐

d) Focal glomerulonephritis ☐

14) 12 Serum hepatitis is caused by

a) hepatitis A virus ☐ b) hepatitis B virus ☐

c) hepatitis D virus ☐ d) hepatitis C virus ☐

15) The important site for synthesis of triglycerides is

a) Brain ☐ b) Adipose tissue ☐

c) HDL ☐ d) LDL ☐

16) Which of the following plasma enzymes are increased in the viral hepatitis ?

a) Psuedodholinesterase ☐ b) Alkaline phosphatase ☐

c) Carbonic anhydrase ☐ d) None ☐

_____

SLR-G – 15

Seat No.	

Bachelor of Pharmacy (Semester – III) Examination, 2014
PATHOPHYSIOLOGY AND CLINICAL BIOCHEMISTRY – I

Day and Date : Friday, 23-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

***Instructions** : 1) **All** questions are **compulsory**.*
*2) Figures to **right** indicate **full** marks.*

SECTION – I

II. Answer **any four** : **16**

1) Write short note on H_2CO_3/HCO_3 buffer system.
2) Write short note on dehydration.
3) Write in brief about pathological change in viral hepatitis.
4) Describe the types of malignant tumors and the etiology.
5) What are pathological changes in acute pancreatitis ?
6) Discuss plasma proteins give its clinical significance.

III. Answer the following : **16**

1) Discuss pathogenesis, symptoms and preventive measures of liver cirrhosis in detail.
2) Give Henderson and Haselbalch equation and its use in evaluation of acid base status. Discuss in detail.

OR

2) What is rheumatoid arthritis ? Discuss its pathophysiology, give it causes, abnormalities and management.

SECTION – II

IV. Answer **any four** : **16**

1) The shape of the dissociation curve for Hb is sigmoid explains. Why ?
2) What is alkalosis ? Describe its prevention and management.
3) Write in brief about gall stones and give its parthenogenesis.
4) Discuss hyperlipidaemia and fatty liver.
5) Explain the term hypoxia and anorexia and give the causes.
6) What is UTI ? Describe in detail about the causes of pathogenesis.

V. Answer the following : **16**

1) Give the mechanisms in detail by which the kidney maintains acid base balance.
2) Discuss pathogenesis, symptoms, causes and preventive measures of peptic ulcer in detail.

OR

2) What is meant by inflammation and explain the process of inflammation in detail. Enlist its type and describe it with suitable examples.

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Code No. **SLR-G – 16**

Seat No.	

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B.Pharmacy (Semester – IV) Examination, 2014
PHYSICAL PHARMACY – II

Day and Date : Tuesday, 13-5-2014 Time : 3.00 p.m. to 6.00 p.m. Max. Marks : 80

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

________ Examination ________

________ (Paper - ________)

For Office Use only
Code No.

MCQ/ Objective Type Questions

Marks : 16

I. Multiple choice questions : **(1×16=16)**

1) Which of the following particle size range measured by conductivity method ?

a) 50-1500 μm
b) 1-200 μm
c) 0.5-500 μm
d) 0.2-100 μm

P.T.O.

2) The type of particle diameter that is obtained by microscopy method of evaluation.
   a) Stokes ☐ b) Projected ☐
   c) Volume ☐ d) Volume-surface ☐

3) Adsorption of water vapor on charcoal at 100°C is example of which type of absorption isotherm
   a) Type V ☐ b) Type IV ☐
   c) Type III ☐ d) Type I ☐

4) Which of the following shows negative absorption ?
   a) SLS ☐ b) Triehanolamine ☐
   c) Sodium chloride ☐ d) Tween ☐

5) Which of the following forms soluble monomolecular layer ?
   a) Cetyl alcohol ☐ b) Amyl alcohol ☐
   c) Ethyl alcohol ☐ d) All of these ☐

6) The phenomenon of increasing the solubility of non-polar drug by addition of surfactant is know as
   a) Dissolution ☐ b) Micellar solubilization ☐
   c) Cosolvency ☐ d) Hydrotropy ☐

7) The differences in the work of adhesion and the work of cohesion of liquids on the surface of other liquid is known as
   a) Spreading coefficient ☐ b) Viscosity ☐
   c) Contact angle ☐ d) Surface tension ☐

8) Clouds are the example of which of colloidal system
   a) Aerosol ☐ b) Foam ☐
   c) Smoke ☐ d) Gel ☐

9) Which of the following is positively charged sol ?
   a) Clay ☐ b) Starch ☐
   c) Haemoglobin ☐ d) Arsenic sulphide ☐

10) In case of suspension, which of the following statement is false.
   a) It is an injectable preparation ☐
   b) It is an oral preparation ☐
   c) It does not include a preservative ☐
   d) It contains a suspending agent ☐

11) Oil in water type of emulsion usually shows creaming in _____ direction.
   a) Upward ☐ b) Downward ☐
   c) Both a) and b) ☐ d) None ☐

12) Which of the following equation is used for predicting the shelf life of a drug product ?
   a) Michaelis-Mention ☐ b) Hixon-Crowell ☐
   c) Arrehenius ☐ d) Henderson-Hasselbalch ☐

13) Chelates are which type of complexes
   a) Organic molecular ☐ b) Inclusion ☐
   c) Metal ☐ d) None ☐

14) Which of the following do not show tyndall effect ?
   a) True solution ☐ b) Suspension ☐
   c) Colloidal solution ☐ d) None ☐

15) Hydrolysis of ester by sodium hydroxide followed which type order of reaction.
   a) First ☐ b) Second ☐
   c) Pseudo ☐ d) None ☐

16) As the temperature increases, the surface tension.
   a) Increases ☐ b) Remain constant ☐
   c) Decreases ☐ d) None ☐

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SLR-G – 16

Seat No.	

B.Pharmacy (Semester – IV) Examination, 2014
PHYSICAL PHARMACY – II

Day and Date : Tuesday, 13-5-2014 Marks : 64

Time : 3.00 p.m. to 6.00 p.m.

SECTION – I

II. Answer **any four** : **(4×4=16)**

1) What is porosity ? Correlate it with dissolution rate of dosage forms.

2) Define and classify sol. Give the types of colloidal system with examples.

3) How would you determine the shelf life of new pharmaceutical product ?

4) Write a note on frequency distribution curves.

5) Comment on electrical properties of interface.

6) Give a note on hardy-schulze rule and gold number.

III. Answer the following : **(8×2=16)**

1) Enlist various methods of determination of surface tension. Explain in detail any two methods.

2) Enlist various methods of particle size determination. Write in detail about optical microscopy and conductivity method.

OR

2) What do you mean by emulsifying agent ? Note on theories of emulsification.

SECTION – II

IV. Answer **any four** : **(4×4=16)**

1) Discuss in detail any two methods of preparation of sol.

2) Note on a purification of sol.

3) Note on theory of sedimentation of suspension.

4) Derive and describe Arrhenius equation.

5) Write a note on packing arrangements.

6) What is surface and interfacial tension ? Give its unit. Explain factors influencing on it.

V. Answer the following : **(8×2=16)**

1) Define colloids. Discuss in detail kinetic and electrical properties of sol.

2) Define derived property of powder. Explain in detail about derived properties of powder.

OR

2) Define and classify complex. Give its analysis techniques in detail.

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Code No. **SLR-G – 17**

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B.Pharmacy (Semester – IV) Examination, 2014
MICROBIOLOGY

Day and Date : Saturday, 17-5-2014 **Time : 3.00 p.m. to 6.00 p.m.** **Total Marks : 80**

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

____________ Examination ____________

____________ (Paper - ________)

For Office Use only
Code No.

MCQ/Objective Type Questions

Marks : 16

SECTION – A

1. Answer the following : **(1×16=16)**

   1) The biological indicator used for moist heat sterilization is ________
      a) B. subtilis
      b) Clostridium tetani
      c) B. sterearothermophilis
      d) B. pumulis

P.T.O.

2) The important characteristic of spore is the presence of _____
   a) Dipicolinic acid
   b) Dipicolinic acid and large amount of calcium ions
   c) Dipicolinic acid and little amount of calcium ions
   d) None

3) Actinomyces spp. are Gram positive, filamentous rods, have the Pharmaceutical importance in _____
   a) Validate and monitor moist heat sterilization
   b) Antibiotic production
   c) Validate and monitor dry heat sterilization
   d) Vaccine against whooping cough

4) Which is the eukaryote ?
   a) Fungi
   b) Chlamydia
   c) Mycoplasma
   d) Bacteria

5) Glass vessels and syringes are best sterilized by
   a) Hot air oven
   b) Autoclaving
   c) Radiation
   d) Ethylene oxide

6) The usual concentration of Agar used in agar culture media is _____%
   a) 4
   b) 10
   c) 8
   d) 2

7) F factor integrate with bacterial chromosome and it forms

a) Hfr ☐ b) RTF + R ☐

c) F^- ☐ d) RTF ☐

8) Interleukin-1 is produced by _____

a) T-helper cells ☐ b) B-helper cells ☐

c) Monocytes ☐ d) None ☐

9) Cathetin is produced by _____

a) Neutrophils ☐ b) Eosinophils ☐

c) Macrophages ☐ d) Basophils ☐

10) _____ is an example of artificial virus.

a) Vaccinia ☐ b) Rabies ☐

c) Mumps ☐ d) Rhinovirus ☐

11) Mites transmits

a) Trench fever ☐

b) Scrub fever ☐

c) Endemic fever ☐

d) Epidemic fever ☐

12) Which is the following true about Vibrio Cholera ?

a) Very resistance to alkaline pH ☐

b) Nutritionally fastidious ☐

c) Best growth at 4°C ☐

d) Rod shaped bacilli ☐

13) Staphylococcus does not causes

a) Bronchopneumonia ☐

b) Osteomyelitis ☐

c) Abscess ☐

d) Scarlet fever ☐

14) Dark field microscope is used to view

a) Capsule ☐

b) Refractive organs ☐

c) Fimbriae ☐

d) Flagella ☐

15) In autoclaving the temperature and pressure and time reached is

a) 121°C at 14.5 lb/in for 15 min ☐

b) 110°C at 14.5 lb/in for 20 min ☐

c) 115°C at 16 lb/in for 15 min ☐

d) 116°C at 16 lb/in for 20 min ☐

16) The best laboratory method to diagnose AIDS infection is

a) RIA ☐

b) ELISA ☐

c) Western blot test ☐

d) Complement fixatation test ☐

SLR-G – 17

Seat No.	

B.Pharmacy (Semester – IV) Examination, 2014
MICROBIOLOGY

Day and Date : Saturday, 17-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

SECTION – B

2. Answer **any four** of the following : **(4×4=16)**

   1) Classify Rickettsiae and give its general characteristics.

   2) Discuss in detail contribution of Robert Koch.

   3) Explain the terms D value Z value, define attenuation and exaltation.

   4) Give an account of Cell Mediated Immunity (CMI).

   5) Draw a well labeled diagram of bacterial flagella showing internal structure.

   6) Enlist the different culture methods of virus. Elaborate egg culture for viruses.

3. Answer **any two** of the following : **(8×2=16)**

   1) Give an exhaustive account of bacterial conjugation.

   2) Describe the morphology, cultural characteristics pathogenicity of Vibrio cholera.

   OR

   2) Explain in detail viral multiplication with suitable diagram.

SECTION – C

4. Answer **any four** of the following : **(4×4=16)**

   1) Discuss the fundamental characteristics of Fungi.

   2) Describe the different techniques used in electron microscopy.

3) Give the general characteristics and classification of clostridia.

4) What is sterilization ? How will you classify the different sterilization processes ?

5) Give the difference between endotoxins and exotoxins.

6) How will you identify bacteria by IMViC reactions ?

5. Answer **any two** of the following : **(8×2=16)**

1) Describe the morphology of bacterial cell with suitable diagram mention the function of each appendage.

2) Describe the morphology, cultural characteristics pathogenicity of Mycobacterium tuberculosis.

OR

2) How you will determine phenol coefficient by Rideal Walker method and Kelsey-Sykes test ?

Code No. **SLR-G – 18**

Seat No.	

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B.Pharm. (Semester – IV) Examination, 2014
ORGANIC CHEMISTRY – III

Day and Date : Tuesday, 20-5-2014 Time : 3.00 p.m. to 6.00 p.m. Total Marks : 80

Day & Date ________	Language of Answer ________
Examination ________	Paper No. ________
Subject ________	Section ________

Marks -	Out of
Signature of Examiner	

________ Examination ________

________ (Paper - ________)

For Office Use only
Code No.

MCQ/Objective Type Questions

Marks : 16

1. 1) The isomers of a substance must have
   - a) Same chemical properties ☐
   - b) Same molecular weight ☐
   - c) Same structural formula ☐
   - d) Same functional group ☐

P.T.O.

2) Alkenes shows geometrical isomerism due to
   a) Asymmetry
   b) Rotation around a single bond
   c) Resonance
   d) Restricted rotation around a double bond

3) Optical isomers that are not mirror images are called
   a) Diastereomers
   b) Enantiomers
   c) Metamers
   d) Meso compounds

4) Consider (R) and (S) 2-butanol which physical properties distinguishes the two compounds.
   a) M.P.
   b) Solubility in common solvent
   c) Rotation of plane polarised light
   d) Infrared spectrum

5) _____ rearrangement reaction is a carbocation rearrangement involving change in carbon skeleton.
   a) Wagner-Meerwein
   b) Pinacol
   c) Wolf
   d) Beckman

6) During Lossen rearrangment the intermediate formed is
   a) Ketene
   b) Isocyanate
   c) Carbocation
   d) Nitrene

7) Conversion of α diazoketone to ketone is called

a) Wolf
b) Curtius
c) Dakin
d) Witting

8) _____ rearrangement reaction proceed via enamine intermediate.

a) Favorskii
b) Willgerodt
c) Sommetet
d) Stevens

9) In D/L nomenclature the compound used a reference is

a) Glucose
b) Alanine
c) Galactose
d) Glycerol dehyde

10) Enantiomers are

a) Just mirror images
b) Super impassable mirror images
c) Non-super impassable mirror images
d) Not mirror images

11) Dotted line indicates group

a) in the plane
b) above the plane
c) behind the plane
d) none of these

12) Replacement of aldehyde or ketone group by hydroxy group in presence of alkaline H_2O_2 is called by

a) Dakin
b) Lossen
c) Curtius
d) Wolf

13) Conversion of hydronic acid to 1° amine is called as -

a) Lossen ☐ b) Wolf ☐

c) Fries ☐ d) Dakin ☐

14) Plane polarised light is affected by

a) Identical molecules ☐ b) All polymers ☐

c) Chiral molecules ☐ d) All biomolecules ☐

15) Geometrical isomerism is shown by

a) Lactic acid ☐ b) Maleic acid ☐

c) 1 -Butene ☐ d) 1, 1-dichloroethylene ☐

16) Which of the following compound may exist as cis-trans isomers ?

a) 1-Butene ☐ b) 2-Butene ☐

c) Cyclopropane ☐ d) Acetone ☐

SLR-G – 18

Seat No.	

B.Pharm. (Semester – IV) Examination, 2014
ORGANIC CHEMISTRY – III

Day and Date : Tuesday, 20-5-2014 Marks : 64

Time : 3.00 p.m. to 6.00 p.m.

SECTION – I

2. Answer **any four** : **(4×4=16)**

   1) Draw Newmann projection formula for ethane and n-butane.

   2) Give reaction and mechanism of wolf rearrangement.

   3) Define terms configuration, conformation, dextro rotatory and levo rotatory.

   4) Write a reaction and mechanism of the rearrangement in which there is change in carbon skeleton.

   5) Draw potential energy diagram for ethane.

   6) Write a note on electro cyclic reaction.

3. Answer the following : **(2×8=16)**

   1) Give a complete account on conformation and stability of ethane.

   2) Write in detail about Favorskii rearrangement.

   OR

   2) Write a note on SN′ reaction in detail.

SECTION – II

4. Answer **any four** : **(4×4=16)**

   1) Write a note on sigmatropic reaction.
   2) What is curtius rearrangement.
   3) Write on E1 elimination reaction.
   4) Write note on Schimidt rearrangement.
   5) Write a note on optical isomerism.
   6) Write a note on decarboxylation of β-phenyl isovaleraldehy dB.

5. Answer the following : **(2×8=16)**

   1) Write a Stereochemistry of Sni reaction. Write on any two methods of resolution of racemic mixture.
   2) Write a note on cyclo addition reaction.

   OR

   2) Write in detail of Fries rearrangement.

Code No. **SLR-G – 19**

Seat No.	

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B.Pharm. (Semester – IV) Examination, 2014
PHARMACEUTICAL ANALYSIS – II

Day and Date : Thursday, 22-5-2014 **Time : 3.00 p.m. to 6.00 p.m.** **Max. Marks : 80**

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

____________ Examination ____________

____________ (Paper - ________)

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Code No.

MCQ/Objective Type Question Paper

Marks : 16

1. Multiple Choice Questions : **(16×1=16)**

   1) Excess of EDTA is back titrated with ____________

      A) Zinc chloride ☐ B) Magnesium chloride ☐

      C) Both A) and B) ☐ D) None of above ☐

P.T.O.

2) The K.F. apparatus is suitable for materials having content of water of about _____

A) 1% ☐ B) 0.1 % ☐

C) 0.01 % ☐ D) 0.001 % ☐

3) ELISA is used for measuring concentration of molecule from _____

A) Serum ☐ B) Urine ☐

C) Both A) and B) ☐ D) None of above ☐

4) _____ is not an amphiprotic solvent.

A) Acetic acid ☐ B) Alcohol ☐

C) Water ☐ D) None of above ☐

5) Ascorbic acid is a masking agent for _____

A) Iron ☐ B) Aluminium ☐

C) Mercury ☐ D) Arsenic ☐

6) Analysis of alcohol in breath is _____ sampling technique.

A) Gas sampling vessel ☐ B) Static sensor ☐

C) Entrapment ☐ D) Real time analysis ☐

7) K.F.R. reagent consists of _____

A) I_2 + SO_2 + pyridine ☐

B) I_2 + SO_2 + pyridine + methanol ☐

C) I_2 + SO_2 + Methanol ☐

D) I_2 + SO_2 ☐

8) The platinum wire fused in Oxygen flask stopper is _____ cm long.

A) 11 ☐ B) 12 ☐

C) 13 ☐ D) 14 ☐

9) Kjeldahl's method is used for the estimation of _____

A) Oxygen ☐ B) Nitrogen ☐

C) Hydrogen ☐ D) Halogen ☐

10) Sodium nitrite titrations are used for determination of _____

A) Primary amine ☐ B) Sulphanilamide ☐

C) Sulpha drugs ☐ D) All of above ☐

11) Assay of Nor-floxacin is _____ type of titration.

A) Aqueous ☐ B) Non-Aqueous ☐

C) Precipitation ☐ D) Complexometric ☐

12) _____ is most versatile metallochrome indicator.

A) Calcon ☐ B) Catechol violet ☐

C) Eriochrome black T ☐ D) Murexide ☐

13) The purity of precipitate depends upon _____

A) Addition of precipitating agent ☐

B) Substances present in solution ☐

C) Rate of precipitation ☐

D) None of above ☐

14) The analysis of liquid sample is done by solvent _____

A) Dissolution ☐

B) Evaporation ☐

C) Extraction ☐

D) None of above ☐

15) _____ is not used for filtration.

A) Filter paper ☐

B) Filter mat ☐

C) Filter pulp ☐

D) None of above ☐

16) Split tube thief is used for sampling of _____

A) Solid ☐

B) Liquid ☐

C) Gases ☐

D) All of above ☐

_____

SLR-G – 19

Seat No.	

B.Pharm. (Semester – IV) Examination, 2014

PHARMACEUTICAL ANALYSIS – II

Day and Date : Thursday, 22-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

SECTION – I

2. Answer **any four** of the following questions : **(4×4=16)**

   1) How will you prepare 1000 ml of 0.1 N perchloric acid ? Give its standardization.

   2) Define : Increment, Gross sample, Sample, Sampling unit.

   3) Draw a neat labeled diagram of Kjeldahl's method. Give the procedure for the same.

   4) Write a note on RIA.

   5) Explain in detail determination of chlorine, bromine and iodine by oxygen flask combustion method.

   6) Explain in detail gasometry.

3. Answer the following questions : **(2×8=16)**

   1) Explain in detail Karl-Fischer method.

   2) Explain in detail sampling of solid.

   OR

   3) Give raw material analysis of Starch.

SECTION – II

4. Answer **any four** of the following questions : **(4×4=16)**

   1) Give the difference between masking and demasking.

   2) How will you determine the % purity of sulphanilamide ? Give the principle behind it.

   3) Explain in detail sampling, dissolution, digestion and ignition.

   4) Explain in detail metallochrome indicators.

   5) Explain the properties of solvents used in non-aqueous titrations.

   6) Explain the assay of zinc sulphate by gravimetry.

5. Answer the following questions : **(2×8=16)**

   1) Give the preparation and standardization of 0.05 M disodium EDTA. Explain in detail types of EDTA titrations.

   2) Give the preparation and standardization of 0.1 M $NaNO_2$. Explain in detail end point detection in nitrite titrations.

   OR

   3) Explain in detail filtration and precipitation in gravimetry.

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Code No. **SLR-G – 2**

Seat No.	

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Seat No. _____ Centre _____	For Office Use Only
Seat No. in words _____	Code No.

B.Pharm. (Semester – I) Examination, 2014
PHARMACEUTICAL INORGANIC CHEMISTRY

Day and Date : Thursday, 15-5-2014 **Time : 10.00 a.m. to 1.00 p.m.** **Max. Marks : 80**

Day & Date _____	Language of Answer _____
Examination _____	Paper No. _____
Subject _____	Section _____

Marks -	Out of
Signature of Examiner	

_____ Examination _____

_____ (Paper - _____)

For Office Use only
Code No.

MCQ/Objective Type Questions

Marks : 16

1. Multiple choice questions : **(16×1=16)**

1) _____ used in the treatment of hyper acidity.

A) Aluminium Sulphate ☐ B) Aluminium chloride ☐

C) Aluminium hydroxide gel ☐ D) All of above ☐

P.T.O.

2) The IV iron preparation is _____

A) Ferrous sulphate ☐ B) Ferrous fumarate ☐

C) Ferric ammonium citrate ☐ D) Iron dextrin ☐

3) French chalk is _____

A) Bentonite ☐ B) Light kaolin ☐

C) Purified talc ☐ D) None of these ☐

4) Lugol's solution is used as a source of _____

A) Chloride ☐ B) Iodine ☐

C) Sulphur ☐ D) None of these ☐

5) Silver nitrate is assayed by direct titration with _____

A) Sodium thoisulphate ☐ B) Sodium hydroxide ☐

C) Ferric sulphate ☐ D) Ammonium thiocynate ☐

6) Blue vitrol is _____

A) Copper sulphate ☐ B) Mercuric chloride ☐

C) Zinc sulphate ☐ D) Ferrous sulphate ☐

7) The most widely distributed element on earth is _____

A) Ozone ☐ B) Nitrogen ☐

C) Oxygen ☐ D) Carbon dioxide ☐

8) The solution that resists the changes in pH value is called _____

A) Isotonic solution ☐ B) Saturated solution ☐

C) Buffer solution ☐ D) None of these ☐

9) Oxygen is stored in cylinder whose shoulder painted in _____colour

A) White ☐ B) Black ☐

C) Blue ☐ D) Red ☐

10) _____ is desensitizing agent.

A) Sodium fluoride ☐ B) Strontium chloride ☐

C) Zinc chloride ☐ D) All of above ☐

11) In the treatment of anaemia _____ is used.

A) Calcium gluconate ☐ B) Sodium sulphate ☐

C) Magnesium sulphate ☐ D) Ferrous sulphate ☐

12) _____ is not present in OES.

A) Sodium chloride ☐ B) Potassium chloride ☐

C) Calcium chloride ☐ D) Sodium citrate ☐

13) Epsom salt is _____

A) Magnesium sulphate ☐ B) Copper sulphate ☐

C) Sodium chloride ☐ D) Sodium sulphate ☐

14) _____ is used as astringent.

A) Potassium chloride ☐ B) Zinc sulphate ☐

C) Iodine ☐ D) Hydrogen peroxide ☐

15) The term soluble means _____ parts of solvent.

A) Less than 1 ☐ B) 1 to 10 ☐

C) 10 to 30 ☐ D) 30 to 100 ☐

16) Sources of impurities in pharmaceutical substances are _____

A) Raw material ☐ B) Manufacturing equipments ☐

C) Adulteration ☐ D) All of above ☐

SLR-G – 2

Seat No.	

B.Pharm. (Semester – I) Examination, 2014
PHARMACEUTICAL INORGANIC CHEMISTRY

Day and Date : Thursday, 15-5-2014 Marks : 64
Time :10.00 a.m. to 1.00 p.m.

SECTION – I

2. Answer **any four** of the following questions **(4×4=16)**

1) Write a note on ORS.

2) How expectorant and emetics are classified ? Add a note on Ammonium chloride.

3) Explain role of fluoride and add a note on Sodium fluoride.

4) Give the role of following agents :
   a) dil.HNO_3 b) dil.HCl
   c) Lead acetate cotton plug d) Ammonia

5) Give the preparation , assay and use of ferrous sulphate and ferrous fumarate.

6) Classify antidotes. Explain sodium thiosulphate.

3. Answer the following questions : **(2×8=16)**

1) Give the mechanism of action of antimicrobial agents and give the preparation, assay and uses of H_2O_2 and iodine.

2) How the physiological acid base balance is maintained normally ? Give the complete account of compounds used for acid base balance maintenance.

OR

3) Explain in detail sources of impurities in the pharmaceuticals.

SECTION – II

4. Answer **any four** of the following questions : **(4×4=16)**

   1) Give complete account of official gases.

   2) Write a note on copper as an essential element.

   3) Give the preparation, properties and uses of :
      1) Boric acid 2) Alum

   4) Define :
      a) Expectorant b) Astringent
      c) Cathartic d) Antidote

   5) Write a note on antimicrobial agent

   6) Give the classification of topical agents.

5. Answer the following questions : **(2×8=16)**

   1) Explain in detail the contents of monographs as per IP 2007.

   2) What are antacids ? Give the treatment involved in hyperacidity.

      OR

   3) Give the role of iron as an essential element.

———————

Code No. SLR-G – 20

Seat No.	

Signature of Jr. Supervisor

Seat No. ____________ Centre ____________	For Office Use Only
Seat No. in words ____________	Code No.

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B.Pharm. (Semester – IV) Examination, 2014
PATHOPHYSIOLOGY AND CLINICAL BIOCHEMISTRY– II

Day and Date : Saturday, 24-5-2014 **Time : 3.00 p.m. to 6.00 p.m.** **Total Marks : 80**

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

____________ Examination ____________

____________ (Paper - ________)

For Office Use only
Code No.

MCQ/Objective Type Questions

Marks : 16

1. Choose the appropriate option : **16**

   1) Type-2 Diabetes is also called as
      a) Juvenile onset
      b) Maturity onset
      c) Early onset
      d) None

P.T.O.

2) Fouchet's test is positive when _____ is present in urine.

a) Bilirubin ☐ b) Urea ☐

c) Nitrogen ☐ d) Glucose ☐

3) The most thrombogenic constituent of atheroma is

a) Fibrous cap ☐

b) Lipid core ☐

c) Foam cells ☐

d) Smooth muscle cells ☐

4) If cholesterol content of the blood is decreased in the person, he is suffering from

a) Cholesterol decrease disease ☐

b) Hypocholestremia ☐

c) Cholesterol normal level ☐

d) None ☐

5) Ig E antibody is absent in which of the following type of hypersensitivity reaction

a) Type I (anaphylactic) ☐

b) Type II (cytotoxic) ☐

c) Type III (immune complex) ☐

d) Type IV (cell mediated) ☐

6) Dementia is the most common cause of

a) Alzheimer disease ☐

b) Parkinsonism disease ☐

c) Multiple sclerosis ☐

d) Perivenous encephalomyelitis ☐

7) Increased level of bilirubin is found in

a) Jaundice ☐ b) Achalasia ☐

c) Parkinson ☐ d) None ☐

8) HIV is single stranded virus which contains

a) DNA ☐ b) RNA ☐

c) Protein ☐ d) Both DNA and RNA ☐

9) Emphysema is a disease mostly associated with

a) Alveolar distention ☐

b) Alveolar wall destruction ☐

c) Alveolar shrinking ☐

d) None ☐

10) Shock is life threatening clinical syndrome characterized by

a) Hypotension and hypoperfusion ☐

b) Hypertension and hypoperfusion ☐

c) Hypotension and hyperperfusion ☐

d) None ☐

11) Which of following is CNS disease ?

a) Schizophrenia ☐ b) Angina ☐

c) Pneumonia ☐ d) None ☐

12) Unstable angina is also referred as

a) Prinzmetal ☐ b) Variant ☐

c) Crescendo ☐ d) None ☐

13) Following factors are responsible for atherosclerosis expect

a) Cigarette smoking ☐ b) Diabetes mellitus ☐

c) Hypercholesterolemia ☐ d) Increase in HDL ☐

14) Serum IgE levels are elevated in

a) Intrinsic bronchial asthma ☐

b) Extrinsic bronchial asthma ☐

c) Predominant emphysema ☐

d) Predominant chronic bronchitis ☐

15) In hypertensive heart disease left ventricular hypertrophy is

a) Thickening of ventricular wall ☐

b) Weakening of coronary artery ☐

c) Thickening of coronary artery ☐

d) None ☐

16) Psychoses is result from an over activity of

a) Dopamine ☐ b) GABA ☐

c) Acetyl choline ☐ d) Glutamate ☐

SLR-G – 20

Seat No.	

B.Pharm. (Semester – IV) Examination, 2014
PATHOPHYSIOLOGY AND CLINICAL BIOCHEMISTRY – II

Day and Date : Saturday, 24-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

SECTION – I

2. Answer **any four** of the following : **(4×4=16)**

   1) Explain diagrammatically the pathogenesis of AIDS.

   2) Describe briefly the hypothyroidism.

   3) Define the Shock. Explain briefly its different types.

   4) Explain the diagnostic and analytical use of enzymes.

   5) Write short note on pulmonary embolism.

   6) What is angina pectoris, explain its types.

3. Answer the following : **(8×2=16)**

   1) What is diabetes mellitus ? Explain in detail its types with pathogenesis and complications.

   2) Define Pneumonia. Name the types, explain the causes and complications in detail.

   OR

   Explain in detail Myocardial infarction.

SECTION – II

4. Answer **any four** of the following : **(4×4=16)**

   1) Briefly explain grand mal epilepsy and petit mal epilepsy.

   2) How will you perform estimation of Glucose by Benedict's test ?

   3) Explain the Type II hypersensitivity reaction.

   4) Write a note on Schizophrenia.

   5) What is Myasthenia gravis ? Explain its pathophysiology.

   6) Enlist the normal and abnormal constituents of Urine. Give the clinical significance of each of the abnormal constituents.

5. Answer the following : **(8×2=16)**

   1) What is Rheumatoid Arthritis ? Explain its causes, pathophysiology and complications in detail.

   2) Explain in detail the Cardiac Arrhythmogenesis.

   OR

   Enlist the different COPDs. Explain in detail the causes, pathogenesis and complications any one of them.

Code No. SLR-G – 21

Seat No.	

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Seat No. ______ Centre ______	For Office Use Only
Seat No. in words ______	Code No.

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B.Pharm. (Semester – V) Examination, 2014
SOLID DOSAGE FORM

Day and Date : Monday, 12-5-2014 **Time : 10.00 a.m. to 1.00 p.m.** **Max. Marks : 80**

Day & Date ______	Language of Answer ______
Examination ______	Paper No. ______
Subject ______	Section ______

Marks -	Out of
Signature of Examiner	

______ Examination ______

______ (Paper - ______)

For Office Use only
Code No.

***Instructions** : 1) **All** questions are **compulsory**.*
*2) Figures to **right** indicate **marks**.*

MCQ/Objective Type Questions

Marks : 16

1. Choose the correct alternative : **(16×1=16)**

1) Carr's index for excellent flow property granules is ______
   a) 5 – 15 ☐ b) 12 – 18 ☐
   c) 18 – 21 ☐ d) 23 – 35 ☐

P.T.O.

2) Gelatin capsule shel contain _____% moisture.

a) 0 – 5 ☐ b) 5 – 10 ☐

c) 12 – 15 ☐ d) 16 – 18 ☐

3) _____ is used as opaquant.

a) Sucrose ☐ b) Titanium dioxide ☐

c) Starch ☐ d) Acacia ☐

4) _____ coating gives thin coating.

a) Film ☐ b) Sugar ☐

c) Both a) and b) ☐ d) None of the above ☐

5) Screening is processing step in _____

a) Wet granulation ☐

b) Dry granulation ☐

c) Direct compression ☐

d) All of the above ☐

6) Vegetable capsule shels are prepared by _____

a) Hypromellose ☐

b) Acacia ☐

c) Vinca ☐

d) None of the above ☐

7) % deviation for 450 mg average weight tablet as per U.S.P. is ____ %.

a) 5 b) 7.5

c) 10 d) 15

8) _____ is example of hardness tester.

a) Pfizer tester

b) Erweka tester

c) Monsanto tester

d) All of the above

9) Weight variation is occurs because of _____

a) Poor mixing of granules

b) Punch variation

c) Both a) and b)

d) None of the above

10) Disintegration time for sugar coated tablet is _____ min.

a) 0 – 30 b) 0 – 60

c) 0 – 5 d) 0 – 90

11) _____ microencapsulation technique is suitable for coating of solid and liquid.

a) Air suspension

b) Spray drying and congealing

c) Pan coating

d) None of the above

12) 3rd step of coacervation phase separation is

a) 3 immiscible phase formation

b) Deposition of coating material

c) Rigidization

d) None of the above

13) Process variable for FBC is

a) Temperature ☐ b) Nature of feed ☐

c) Air velocity ☐ d) All of the above ☐

14) Gelatin is used in _____ step of sugar coating.

a) Seal coating ☐ b) Sub coating ☐

c) Syruping ☐ d) Finishing ☐

15) _____ is example of multiple compressed tablet.

a) Layered tablet ☐

b) Compression coated tablet ☐

c) Both a) and b) ☐

d) None of the above ☐

16) _____ tablets used to prepare solutions.

a) Effervescent ☐

b) Buccal ☐

c) Repeat action ☐

d) None of the above ☐

_____

SLR-G – 21

Seat No.	

B.Pharm. (Semester – V) Examination, 2014
SOLID DOSAGE FORM

Day and Date : Monday, 12-5-2014 Marks : 64

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

Instructions *: 1)* ***All*** *questions are* ***compulsory****.*

2) Figures to ***right*** *indicate* ***marks****.*

SECTION – A

2. Answer **any four** of the following questions : **(4×4=16)**

   1) Write a note on preformulation.

   2) Give an account on film coating.

   3) Draw neat labeled diagram of tablet layout.

   4) Why granulation is needed ?

   5) Write a note on compression machine tooling.

   6) Classify tablets and add note on diluents.

3. Answer the following questions : **(2×8=16)**

   1) Give detailed account on film defects and suggest remedies for the same.

   OR

   1) Enlist and explain problems in tableting and give remedies for the same.

   2) Discuss quality control tests for tablet and explain weight variation test in detail.

SECTION – B

4. Answer **any four** of the following questions : **(4×4=16)**
   1) Explain different inprocess Q.C.'s for soft gelatin capsules.
   2) Give an account on problems in capsule filling.
   3) Write a note on multi-orifice microencapsulation technique.
   4) Explain the concept of capsule size selection.
   5) Give advantages and disadvantages of polymerization microencapsulation technique.
   6) Add a note on evaluation of microcapsules.

5. Answer the following questions : **(2×8=16)**
   1) Explain different capsule filling principles.

   OR

   1) Discuss Q.C.'s for capsule. Explain in detail weight variation test for capsule.
   2) Highlight microencapsulation technique. Add a note on co-acervation phase separation technique.

Code No. **SLR-G – 22**

Seat No.	

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Seat No. ________ Centre ________	For Office Use Only
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B.Pharmacy (Semester – V) Examination, 2014
BIOPHARMACEUTICS

Day and Date : Thursday, 15-5-2014 Time : 10.00 a.m. to 1.00 p.m. Max. Marks : 80

Day & Date ________	Language of Answer ________
Examination ________	Paper No. ________
Subject ________	Section ________

Marks -	Out of
Signature of Examiner	

________ Examination ________

________ (Paper - ________)

For Office Use only
Code No.

SECTION – A

MCQ/Objective Type Questions

Marks :16

1. Multiple choice questions : **(1×16=16)**

1) Which marker is used to measure the volume of plasma ?

a) Evans blue b) Inulin

c) Mannitol d) None of these

P.T.O.

2) The drug concentration between Minimum Effective Concentration (MEC) and Maximum Safe Concentration (MSC) represent

a) Therapeutic index ☐ b) Therapeutic range ☐

c) Toxic level ☐ d) Subtherapeutics level ☐

3) Following is highly perfused organ / tissues

a) Lung ☐ b) Kidney ☐

c) Brain ☐ d) All of the above ☐

4) Central compartment consists of

a) Poor perfusion ☐ b) Highly perfusion ☐

c) Low vascularity ☐ d) Both a) and b) ☐

5) Which polymorph represents higher energy state, lower M.P. and higher aqueous solubility ?

a) Metastable ☐ b) Stable ☐

c) Monotropic ☐ d) Enatiotropic ☐

6) Which transport process involves transport of substance within vesicles into cell ?

a) Transcellular ☐ b) Paracellular ☐

c) Vesicular ☐ d) Both a) and b) ☐

7) Which dosage form has higher bioavailability ?

a) Solution ☐ b) Sustained release tablet ☐

c) Enteric coated tablet ☐ d) None of these ☐

8) Michaelis-Menten plot shows _____ rate at low doses.

a) Zero-order ☐ b) First-order ☐

c) Both a) and b) ☐ d) None of these ☐

9) A decrease in the drug metabolizing ability of an enzyme is called as

a) Enzyme inhibition ☐ b) Enzyme induction ☐

c) Auto-induction ☐ d) Both a) and b) ☐

10) Nonlinearity in pharmacokinetics of a drug is due to saturation of

a) Protein binding ☐ b) Hepatic metabolism ☐

c) Active renal transport ☐ d) All of the above ☐

11) The pH of a buffer system can be calculated with the

a) Noyes – Whitney equation ☐

b) Henderson – Hasselbalch equation ☐

c) Michaelis – Menten equation ☐

d) Stokes equation ☐

12) Pharmacodynamics means study of _____

a) What the drug does to the body ☐

b) What the body does to drug ☐

c) Both a) and b) ☐

d) None of these ☐

13) One of the following is a inorganic diluents _____

a) Starch ☐ b) Lactose ☐

c) Microcrystalline cellulose ☐ d) Dicalcium phosphate ☐

14) Drug with following property will have better chance to cross blood brain barrier

a) High lipophilicity ☐

b) High hydrophilicity ☐

c) Low O/W partition coefficient ☐

d) None of these ☐

15) Which phase represent if the rate of elimination exceeds rate of absorption ?

a) Absorption phase ☐

b) Elimination phase ☐

c) Peak plasma concentration ☐

d) Both a) and b) ☐

16) What is ICH ?

a) International Conference On Harmonization ☐

b) Indian Conference On Hormones ☐

c) International Conference On Health ☐

d) All of the above ☐

SLR-G – 22

Seat No.	

B.Pharmacy (Semester – V) Examination, 2014
BIOPHARMACEUTICS

Day and Date : Thursday, 15-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – B

2. Attempt **any four** : **(4×4=16)**

1) Enlist the various non-renal routes of drug elimination. Explain any one non-renal routes of elimination.

2) What is non-linear pharmacokinetics ? Describe various causes of non-linearity in pharmacokinetics.

3) Explain in brief carrier mediated transport and facilitated diffusion process.

4) Describe in brief ICH guidelines.

5) Write a note on apparent volume of distribution. Why it is termed as apparent ?

6) Define :
   a) Perfusion rate b) Clearance
   c) Extraction ratio d) Bioequivalence

3. Answer the following : **(2×8=16)**

1) What is pharmacokinetics ? Describe the types of Pharmacokinetics model.

2) Explain in detail about one compartment open model I.V. Bolus administration with mathematical expression.

OR

2) Enlist the factor affecting absorption. Describe the dosage form related factor affecting absorption.

SECTION – C

4. Answer **any four** : **(4×4=16)**

   1) What is compartment model ? What are central and peripheral compartment ?

   2) Name the three approaches by which a polar drug can be targeted to brain.

   3) Describe the enterohepatic cycling of drug.

   4) What is biopharmaceutics ? Write a note on biopharmaceutical classification system.

   5) Discuss in detail diffusion layer model and surface renewal theory.

   6) Write a note on pH partition hypothesis.

5. Answer the following : **(2×8=16)**

   1) Explain in detail method for measurement of bioavailability.

   2) What is distribution ? Describe in detail factor affecting distribution of drug.

   OR

   2) Define elimination. Explain the factor affecting elimination.

Code No. **SLR-G – 23**

Seat No.	

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Seat No. ____________ Centre ____________	For Office Use Only
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B.Pharm. (Semester – V) Examination, 2014
MEDICINAL CHEMISTRY – I

Day and Date : Monday, 19-5-2014 Time : 10.00 a.m. to 1.00 p.m. Total Marks : 80

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

____________ Examination ____________

____________ (Paper - ________)

For Office Use only
Code No.

MCQ/Objective Question Paper

Marks : 16

1. Multiple choice questions : **(16×1=16)**

1) The heterocyclic ring present in thiabendazole

A) Benzthiazole ☐ B) Thiazole ☐

C) Benzimidazole ☐ D) Furan ☐

P.T.O.

2) Penicillin is

A) Tetracycline antibiotic ☐ B) Polypeptide antibiotic ☐

C) Beta lactum antibiotic ☐ D) Aminoglycoside antibiotic ☐

3) Drug with functional group alcohol, amines can interact with receptor binding site by means of

A) Vander Waals interaction ☐

B) Hydrogen bonding ☐

C) Covalent bonding ☐

D) Ionic bonding ☐

4) The heterocyclic ring present in mebendazole is

A) Benzthiazole ☐ B) Benzimidazole ☐

C) Oxazole ☐ D) Purine ☐

5) Concentration of complexing agent is _____ solubility.

A) Increases ☐ B) Decreases ☐

C) Same ☐ D) No change ☐

6) Penicillin on acid degradation it gives

A) Penicillamine ☐ B) Penicillic acid ☐

C) Penicillo-aldehyde ☐ D) All ☐

7) Metronidazole can be synthesized from

A) 2-methylpyridine ☐ B) 4-nitroimidazole ☐

C) 3-methyl pyrazole ☐ D) 5-nitropyrazole ☐

8) Phenformin belongs to the

A) Biguanides ☐ B) Sulphonyl urea ☐

C) Benzoic acid derivatives ☐ D) Thiazolidinediones ☐

9) Synonym of mebendazole is

A) Antimenth ☐ B) Vermox ☐

C) Pyrental ☐ D) Mentazole ☐

10) _____ enzyme is the type of non-microsomal enzyme.

A) Cyt-p-450 ☐ B) Mono-oxygenase ☐

C) Esterase ☐ D) Glucuronyl transferase ☐

11) A macrolide antibiotic donot have

A) A large lactone ring ☐

B) A Spiroketal group ☐

C) A ketone group ☐

D) A glycosidically linked aminosugar ☐

12) Liphophilicity is characterized by

A) Ionization ☐ B) Solubility ☐

C) Partition coe ☐ D) Diffusion ☐

13) Erythromycin is an antibiotic it belongs to the class of

A) Beta lactum ☐ B) Aminoglycoside ☐

C) Macrolide ☐ D) Peptide ☐

14) Which of the following potassium sparing diuretics contain pteridine ring ?

A) Furesemide ☐ B) Mannitol ☐

C) Triamtrene ☐ D) None of these ☐

15) Antibiotic produced from streptomyces lincolinesis is

A) Erythromycin ☐ B) Lincomycin ☐

C) Tobramycin ☐ D) Gentamycin ☐

16) One of the following diuretics acts on the loop of Henle

A) Spironolactone ☐ B) Ethacrynic acid ☐

C) Clorexalone ☐ D) Dichlorophenamide ☐

_____

SLR-G – 23

Seat No.	

B.Pharm. (Semester – V) Examination, 2014
MEDICINAL CHEMISTRY – I

Day and Date : Monday, 19-5-2014 Marks : 64

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

SECTION – I

2. Answer **any four** of the following questions : **(4×4=16)**

   1) Classify oral hypoglycemic agent with e.g.

   2) Write the chemical name of Tinidazole, Hycanthone, Niclosamide, Chlopropamide.

   3) Draw the structure of Mebendazole, Glibenclamide, Lucanthone, Diloxanide furoate.

   4) Write a note on loop diuretics with e.g.

   5) Classify antiamoebics with e.g.

   6) Write a note on surface activity.

3. Answer the following questions : **(2×8=16)**

   1) What are the factors affecting the metabolism ?

   2) Write the synthesis of Metronidazole, Niridazole, Tolbutamide.

   OR

   3) Write the MOA, SAR and Degradation of penicilline.

SECTION – II

4. Answer **any four** of the following questions : **(4×4=16)**

   1) Write a note on drug receptor interaction.

   2) Write MOA of Methazolamide.

   3) Outline the synthesis of Tolbutamide, Mebendazole.

   4) Classify anthelmentics giving suitable e.g.

   5) Write a note on Solubility.

   6) Discuss MOA and SAR of Nitroimidazole as a antiamoebic agent.

5. Answer the following questions : **(2×8=16)**

   1) Write a note on phase I reaction.

   2) What happen when tetracycline undergo Epimerisation, Degradation, Cleavage, Chelation ?

   OR

   3) What is relation between hydrogen bonding and biology activity ?

———————

Code No. **SLR-G – 24**

Seat No.	

Signature of Jr. Supervisor

Seat No. ____________ Centre ____________	For Office Use Only
Seat No. in words ____________________	Code No.

- -

B. Pharm. (Semester – V) Examination, 2014
PHARMACEUTICAL ANALYSIS -- III

Day and Date : Wednesday, 21-5-2014 Time : 10. 00 a.m.to 1.00p.m. Max. Marks : 80

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

________ Examination ________

____________ (Paper - ______)

For Office Use only
Code No.

MCQ/Objective Type Question Paper

Marks :16

I. Choose the correct alternative : **16**

1) The near ultraviolet region ranges from

a) 100-300 μ m

b) 100-400 μ m

c) 200-400 μ m

d) 200-350 μ m

P.T.O.

2. When absorption energy is increased then the shift is called as
   a) Hypochromic shift ☐
   b) Hyperchromic shift ☐
   c) Bathochromic shift ☐
   d) Hypsochromic shift ☐
3. Electronic transition in organic molecules involves
   a) Transition of σ electrons ☐
   b) Transition of n electrons ☐
   c) Transition of π electrons ☐
   d) All of the above ☐
4. All of the following type of transitions are possible within ligands except
   a) $\eta - \pi^*$ ☐ b) $\eta - \sigma$ ☐
   c) $\sigma - \pi$ ☐ d) $\pi - \pi^*$ ☐
5. The UV region lies between
   a) 200-400 nm ☐ b) 100-200 nm ☐
   c) 400-800 nm ☐ d) 500-600 nm ☐
6. Fluorescence emissions are confined to the transitions
   a) $\sigma^* - \sigma$ ☐ b) $\pi^* - \pi$ ☐
   c) $\pi^* - n$ ☐ d) b) and c) ☐

7. Which of the following statements are correct ?
   a) Self quenching is expected to increase with concentration ☐
   b) Paramagnetic species generally quench fluorescence ☐
   c) Self absorption decreases the flourescence ☐
   d) All are correct ☐
8. Which of the following compounds shows quenching ?
   a) Benzene ☐ b) Naphthalene ☐
   c) Anthracene ☐ d) All ☐
9. Fluorescent behavior is found in compounds containing
   a) Aromatic functional group with low energy $\pi - \pi^*$ transition level ☐
   b) Aliphatic and alicyclic carbonyl structures ☐
   c) Highly conjugated double bond structures ☐
   d) All are correct ☐
10. The greatest advantage of flame photometry in performing qualitative analysis is
    a) Its ease ☐ b) Its speed ☐
    c) Its accuracy ☐ d) All ☐
11. The most widely used flame in atomic absorption is
    a) Air-coal gas ☐ b) Air-propane ☐
    c) Air-acetylene ☐ d) Oxyacetylene ☐
12. Which of the following element is most easily detected by flame photometry ?
    a) Lithium ☐ b) Beryllium ☐
    c) Calcium ☐ d) Sodium ☐
13. Which of the following is an EMR ?
    a) Heat ☐
    b) Current ☐
    c) Sound ☐
    d) Radio waves ☐

14. The analyte is used in the form of a solution in flame photometry because it should undergo

    a) Evaporation ☐ b) Condensation ☐

    c) Nebullization ☐ d) Precipitation ☐

15. In flame photometry with 4 outer electrons, the element is expected to show

    a) Singlet ☐ b) Triplets ☐

    c) Quintets ☐ d) All ☐

16. EMR travels with the

    a) Different velocity ☐

    b) Velocity decreased by decreasing temperature ☐

    c) Same velocity ☐

    d) Low velocity ☐

SLR-G – 24

Seat No.	

B.Pharm. (Semester – V) Examination 2014
PHARMACEUTICAL ANALYSIS – III

Day and Date : Wednesday, 21-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – I

2. Attempt **any four** : **16**

1) Explain the reasons for deviation from Beer's law.

2) What are the optimum conditions for spectrophotometric measurements ?

3) Write note on Woodward Feiser rule.

4) Write note on fluorescence spectroscopy.

5) What are the advantages of AAS over FES ?

6) Write down applications of flame photometry.

3. Answer the following : **16**

1) Draw neat labeled diagram of double beam UV-spectrophotometer. Explain the detectors used and sources used in UV-spectroscopy. **8**

2) Explain in detail factors affecting fluorescence intensity. **8**

OR

2) Explain in detail instrumentation of atomic absorption spectroscopy.

SECTION – II

4. Answer **any four** : **16**

   1) Discuss electromagnetic radiation and EMR spectra.

   2) Explain Bathochromic and hypsochromic shift in UV-Visible spectroscopy.

   3) Write note on different monochromators used in UV-Visible spectroscopy.

   4) What are applications and limitations of AAS ?

   5) Explain excitation and emission spectra in fluorescence spectroscopy.

   6) Write note on interferences in flame photometry.

5. Answer the following : **16**

   1) Explain in detail Beers-Lamberts law and its application. **8**

   2) Explain instrumentation of flame photometry with a neat labeled diagram. **8**

   OR

   2) Explain in details about detectors used in UV-Visible spectroscopy.

Code No. **SLR-G – 25**

Seat No.	

Signature of Jr. Supervisor

Seat No. ____________ Centre ____________ Seat No. in words ____________	For Office Use Only Code No.

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B.Pharmacy (Semester – V) Examination, 2014
PHARMACOLOGY – I

Day and Date : Friday, 23-5-2014 **Time : 10.00 a.m. to 1.00 p.m.** **Max. Marks : 80**

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

____________ Examination ____________

____________ (Paper - ________)

For Office Use only
Code No.

Note : *1) To be answered in **first 20 minutes** and returned to the room supervisor.*
*2) **All** questions are **compulsory.***
*3) **Each** question carries **1** mark.*

MCQ/Objective Type Questions

Duration : 20 Minutes Marks : 16

1. Choose the most appropriate answer from amongst the four choices for **each** of the following questions :

1) Which of the following drugs is better absorbed in stomach ?

a) Quinine b) Atropine

c) Streptomycin d) Aspirin

P.T.O.

2) In case of First Order Drug Elimination, _____ of the following is true.

   a) Constant amount of drug is eliminated per unit time ☐

   b) Constant fraction of drug is eliminated per unit time ☐

   c) Rate of elimination decreases with increase in plasma concentration ☐

   d) None ☐

3) Atropine can antagonize the actions of the following drugs except _____

   a) Physostigmine ☐ b) Pilocarpine ☐

   c) d-tubocurarine ☐ d) Carbachol ☐

4) Which of the following receptor is not an example of G-Protein Coupled Receptor ?

   a) Beta Adrenergic ☐ b) Nicotinic ☐

   c) Histaminergic ☐ d) 5-HT_1 ☐

5) Which of the following undergoes enterohepatic circulation to produce prolonged purgative action ?

   a) Castor oil ☐ b) Phenolphthalein ☐

   c) Bisacodyl ☐ d) Magnesium sulphate ☐

6) Tachyphylaxis is also called as _____

a) Acute Tolerance ☐ b) Acute Dependence ☐

c) Chronic Tolerance ☐ d) Chronic Dependence ☐

7) Which of the following is a non selective alpha blocker ?

a) Prazosin ☐ b) Yohimbine ☐

c) Tamsulosin ☐ d) Phentolamine ☐

8) The drug of choice in Belladonna poisoning is _____

a) Dimercaprol ☐ b) Physostigmine ☐

c) Adrenaline ☐ d) Atropine ☐

9) Which of the following can be designated as "SIDE EFFECT" ?

a) Dryness of mouth caused by the Atropine ☐

b) Peptic ulcer caused by high dose Aspirin ☐

c) Bone marrow depression caused by anticancer drugs ☐

d) All of the above ☐

10) Which of the following adrenergic drugs is used as uterine relaxant ?

a) Isoxsuprine ☐ b) Naphazoline ☐

c) Terbutaline ☐ d) Oxymetazoline ☐

11) Which is the route of choice for administration of glyceryl trinitrate in Anginal attack ?

a) Sublingual ☐ b) Intravenous ☐

c) Intramuscular ☐ d) Inhalation ☐

12) Which β -blocker has additional α -blocker activity ?

a) Propronalol ☐ b) Carvedilol ☐

c) Sotalol ☐ d) Atenalol ☐

13) Which of the following Cholinergic drug is used therapeutically ?

a) Acetylcholine ☐ b) Pilocarpine ☐

c) Muscarine ☐ d) All of these ☐

14) _____ of the following beta blocker is contraindicated in asthma.

a) Propranolol ☐ b) Atenolol ☐

c) Nebivolol ☐ d) Esmolol ☐

15) Adrenaline is co-administered with the injections of local anaesthetics because

a) It prolongs the action of local anaesthetics ☐

b) It reduces the risk of convulsions ☐

c) It does not allow the lowering of BP ☐

d) Local anaesthetics are dangerous to be administered alone ☐

16) Ganglionic blockers, the highly potent class of drugs are not used therapeutically because

a) They block both sympathetic and parasympathetic and sympathetic ganglia ☐

b) They also are produce highly potent toxic effects ☐

c) There are safer drugs available now a days ☐

d) All of the above ☐

SLR-G – 25

Seat No.	

B. Pharmacy (Semester – V) Examination, 2014
PHARMACOLOGY – I

Day and Date : Friday, 23-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

Note : *1)* ***All*** *questions are* ***compulsory.***

2) Figures to the ***right*** *indicate* ***full*** *marks.*

SECTION – I

2. Answer **any four** of the following **(4×4=16)**

i) Give various sources of drugs with examples.

ii) Write a note on bioavailability.

iii) Write notes on drug distribution.

iv) Write note on excretion of drugs.

v) Define Anaphylaxis, Tachyphylaxis, Teratogenicity and Carcinogenicity.

vi) What do you mean by the terms – agonist, antagonist, action and effect ?

3. Answer the following : **(8×2=16)**

i) Discuss in detail the factors modifying drug absorption.

ii) Enlist various routes of drug administration in a classified manner. Give the advantages and disadvantages of oral and intravenous routes.

OR

ii) Compare the Pharmacological effects of Noradrenaline, Adrenaline and Isoprenaline.

SECTION – II

4. Answer **any four** of the following : **(4×4=16)**

   i) Give clinical classification of adrenergic drugs with examples.

   ii) Discuss in brief the pharmacology of d-tubocurarine.

   iii) Classify ganglionic stimulants and ganglionic blockers with appropriate examples.

   iv) Which anticholinesterase drug is preferred in the treatment of Myesthenia Gravis ? Why physostigmine is not preferred ?

   v) Write a note on Dale's Vasomotor Reversal.

   vi) Brief neurohumoral transmission at sympathetic postganglionic nerve endings.

5. Answer **any two** of the following : **(8×2=16)**

   i) Give detailed classification of sympatholytic drugs with examples.

   ii) Classify cholinesterase inhibitors with examples. Discuss symptomatology and treatment of irreversible anticholinesterase poisoning.

   OR

   ii) Discuss the Pharmacology of Atropine.

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Code No. SLR-G – 26

Seat No.	

Signature of Jr. Supervisor

Seat No. ________ Centre ________ Seat No. in words ________	For Office Use Only Code No.

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B.Pharmacy (Semester – V) Examination, 2014
BIOTECHNOLOGY

Day and Date : Monday, 26-5-2014 **Time : 10.00 a.m. to 1.00 p.m.** **Max. Marks : 80**

Day & Date ________ Language of Answer ________

Examination ________ Paper No. ________

Subject ________ Section ________

Marks -	Out of
Signature of Examiner	

________ Examination ________

________ (Paper - ________)

For Office Use only
Code No.

MCQ/Objective Type Question Paper

Duration : Minutes Marks : 16

1. Objective type questions : **(1×16=16)**

1) In animal cell, following cell organelle is used for ATP production.

a) Cell Wall ☐ b) Nucleus ☐

c) Cell Membrane ☐ d) Mitochondria ☐

2) ____________ is the method of surface immobilization.

a) Covalent bonding ☐ b) Chelation ☐

c) Adsorption ☐ d) All of the above ☐

P.T.O.

3) Total number of stopping (nonsense) codons present in man are _____

a) 60 b) 3

c) 64 d) 20

4) Coding region in the gene is called as _____

a) Exon b) Intron

c) Spacer d) a) and c)

5) Callus in plant tissue culture is _____

a) Organized cell mass b) Unorganized cell mass

c) Totipotency d) Explant

6) One of the following is not germ plasm

a) Gene b) Plasmid

c) Protoplast and cells d) Amino acids

7) Media used for dextran fermentation contains

a) Glucose b) Fructose

c) Sucrose d) Mannose

8) Northern blotting is used for specific identification of _____

a) Proteins b) DNA

c) RNA d) None of above

9) Aspect ratio of fermenter is _____ ratio.

a) Feed/product b) Height/Diameter

c) % of product produced d) Both a) and b)

10) In plant tissue culture, one of the following reagent is not used for surface sterilization.

a) Sodium hypochlorate ☐ b) Bromine water ☐

c) Mercuric chloride ☐ d) Sodium chloride ☐

11) Suitable p^H used for the production of penicillin is _____

a) Above 7.3 ☐ b) Below 7.3 ☐

c) Exact 7.3 ☐ d) None of the above ☐

12) In production of Insulin from recombinant *E-coli*, medium should contain following carbon source

a) Glucose ☐ b) Fructose ☐

c) Lactose ☐ d) Maltose ☐

13) Following enzyme joins two DNA strands _____

a) Endonucleases ☐ b) Ligases ☐

c) Linkers ☐ d) Adaptors ☐

14) _____ enzyme used in PCR obtained from *Thermus aquaticus*.

a) Taq ligase ☐ b) Taq nuclease ☐

c) Taq kinase ☐ d) Taq polymerase ☐

15) In genetic code, codon is a group of _____ ribonucleotide base sequences.

a) Two ☐ b) Three ☐

c) Four ☐ d) Five ☐

16) Cell without cell wall is called _____

a) Chloroplast ☐ b) Leucoplast ☐

c) Chromoplast ☐ d) Protoplast ☐

_____

SLR-G – 26

Seat No.	

B.Pharmacy (Semester – V) Examination, 2014
BIOTECHNOLOGY

Day and Date : Monday, 26-5-2014 Max. Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – I

2. Answer **any four** from the following : **(4×4=16)**

   1) Discuss plasmid vector in brief.

   2) Draw neat labeled diagram of conventional fermenter.

   3) Give importance of serum in animal cell culture.

   4) Write short note on plant growth regulators used in plant tissue culture.

   5) Define enzyme immobilization. Write its application.

   6) Describe scope of biotechnology with respect to pharmaceutical field and biomedical field.

3. Answer the following : **(8×2=16)**

   1) Write the principle and steps involved in polymerase chain reaction.

   2) Explain insulin production by recombinant technology.

   OR

   2) Explain genetic engineering of animal cells.

SECTION – II

4. Answer **any four** from the following : **(4×4=16)**

   1) Describe cryopreservation technique in short.

   2) Enlist different stages in downstream processing and add note on purification process.

3) Describe general method of preparation of bacterial vaccines.

4) Write a note on bioconversion.

5) How the plant cells are regenerated in protoplast culture ?

6) Explain agarose gel electrophoresis technique with its applications.

5. Answer the following : **(8×2=16)**

1) Explain the production of penicillin by considering following points.

a) Strains used

b) Inoculum development

c) Fermentation process

d) Recovery

2) Write a note on production of monoclonal antibodies of hybridoma technology.

OR

2) Explain isolation and fusion of protoplast.

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Code No. **SLR-G – 27**

Seat No.	

Signature of Jr. Supervisor

Seat No. ____ Centre ____	For Office Use Only
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B.Pharm. (Semester – VI) Examination, 2014
SEMI SOLID DOSAGE FORM

Day and Date : Tuesday, 13-5-2014 **Time : 10.00 a.m. to 1.00 p.m.** **Max. Marks : 80**

Day & Date ____	Language of Answer ____
Examination ____	Paper No. ____
Subject ____	Section ____

Marks -	Out of
Signature of Examiner	

____ Examination ____

____ (Paper - ____)

For Office Use only
Code No.

MCQ/Objective Type Question Paper

Marks : 16

I. MCQ/Objectives type questions : **(1×16=16)**

1) ________________ is the ability to cling to the surface of application for reasonable duration.

A) Ointment ☐ B) Cream ☐

C) Jellies ☐ D) All the above ☐

P.T.O.

2) The _____ is rate limiting barrier that restric inward and outward movement of chemical substance.

A) Epidermis ☐ B) Keratinized cell ☐

C) Stratum corneum ☐ D) Both B) and C) ☐

3) Rate of diffusion depending primarily on the _____ of drug.

A) Vehicle ☐ B) Physicochemical properties ☐

C) pH ☐ D) Concentration ☐

4) Petrolatum is complex mixture of semisolid _____

A) Hydrocarbon ☐ B) Vegetable oil ☐

C) Peanut oil ☐ D) Fatty acid ☐

5) _____ is example of mineral oil.

A) Peanut ☐ B) Seesum oil ☐

C) Poly ethylene glycol ☐ D) Oliev oil ☐

6) _____ is used as humactant in cream

A) Glycerin ☐ B) Propolene glycol ☐

C) Sorbitol ☐ D) All of the above ☐

7) Concentration of insoluble powdered substance _____ % in paste.

A) 20 to 50 ☐ B) 10 to 15 ☐

C) 70 to 80 ☐ D) 80 to 90 ☐

8) _____ are basically ointments.

A) Creams ☐ B) Paste ☐

C) Jellies ☐ D) Gel ☐

9) _____ Gels are frequently used as basis for medicated pastillies.

A) Agar gel ☐ B) Gelatin gel ☐

C) Glycogelatin gel ☐ D) Xerogels ☐

10) Blood clot is a common example of system that exhibit _____ gel property.

A) Aging ☐ B) Syneresis ☐

C) Swelling ☐ D) None of the above ☐

11) _____ is neutral gelling agent.

A) Tragucant ☐ B) Clays ☐

C) Gur-gum ☐ D) Chitosan ☐

12) Creams possess _____ flow or rheological behaviour.

A) Plastic ☐ B) Pseudoplastic ☐

C) Dilatant ☐ D) Dilatant otherwise plastic ☐

13) _____ is emollient and protective property.

A) Cream ☐ B) Ointment ☐

C) Paste ☐ D) None of the above ☐

14) Ozokerite wax is widely used in _____ formulation.

A) Vanishing cream ☐ B) Cold cream ☐

C) Lipstick ☐ D) All of the above ☐

15) _____ creams can be defined as suspension of stearic acid in gel of stearate.

A) Cold cream ☐ B) Vanishing cream ☐

C) Mascara ☐ D) None of the above ☐

16) _____ are oleogenous basis capable of absorbing several times their own weight of water to foam w/o emulsion.

A) Absorption base ☐ B) Emulsifing base ☐

C) Hydrocarbon base ☐ D) Both A) and B) ☐

_____

SLR-G – 27

Seat No.	

B.Pharm. (Semester – VI) Examination, 2014

SEMI SOLID DOSAGE FORM

Day and Date : Tuesday, 13-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – I

II. Solve **any four** : **(4×4=16)**

1) What are the methods of penetration and absorption through skin ?

2) Define and classify creams, give its advantages and disadvantages.

3) Give an account on stability and evaluation of cream.

4) Classification of gelling agent and explain natural gelling agent.

5) What are cosmetics give advantages and disadvantages ?

6) Define xerogel. Explain structure of gel.

III. Solve **any two** : **(8×2=16)**

1) Classify cosmetics. Explain formulation and evaluation of lipstick.

2) Discuss in detail cold cream and mascara.

OR

2) Describe manufacturing process and equipment for ointment.

SECTION – II

IV. Solve **any four** : **(4×4=16)**

1) Formulation of vanishing cream in detail.
2) Explain mechanism of absorption through skin.
3) Distinguish between ointment and cream.
4) Describe in detail penetration enhancers.
5) Explain formulation and evaluation of eye shadow.
6) Discuss in detail rheology of gel.

V. Solve **any two** : **(8×2=16)**

1) Explain in detail ointment basis and their selection.
2) Describe following properties of gels :
   A) Swelling B) Syneresis

   OR

2) What are factor affecting permeability of drug ? Explain with example.

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Code No. SLR-G – 28

Seat No.	

Signature of Jr. Supervisor

Seat No. _____ Centre _____	For Office Use Only
Seat No. in words _____	Code No.

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B.Pharm. (Semester – VI) Examination, 2014
MEDICINAL CHEMISTRY– II

Day and Date : Saturday, 17-5-2014 Time : 10.00 a.m. to 1.00 p.m. Max. Marks : 80

Day & Date _____ Language of Answer _____
Examination _____ Paper No. _____
Subject _____ Section _____

Marks -	Out of
Signature of Examiner	

_____ Examination _____

_____ (Paper - _____)

For Office Use only
Code No.

MCQ/ Objective Type Question Paper

Marks : 16

1. MCQ :

   1) _____ is used as Quinoline antibacterial agent.

   a) Metronidazole ☐ b) Niclosamide ☐

   c) Nimusulide ☐ d) Norfloxacin ☐

P.T.O.

2) Isoniazide inhibites _____

a) Xanthine oxidase ☐ b) GABA ☐

c) Mycolase synthase ☐ d) Choline esterase ☐

3) _____ is g-Aminoacridine derivative used as antimalarial.

a) Quinacrine ☐ b) Chloroquine ☐

c) Primaquine ☐ d) Mefloquine ☐

4) _____ is mitotic spindle poison used as antifungal agent.

a) Clotrimazole ☐ b) Econazole ☐

c) Butoconazole ☐ d) Griseofulvin ☐

5) _____ Antimetabolite used as antineoplastic agent.

a) Mitomycin – C ☐ b) Methotrexate ☐

c) Vincristine ☐ d) Bleomycin ☐

6) _____ drug inhibits DNA gyrase enzyme

a) Streptomycin ☐ b) Tetracycline ☐

c) Ciprofloxacin ☐ d) Gentamicin ☐

7) Vinca alkaloid used for Cancer Chemotherapy Act by inhibiting.

a) DTMB synthesis ☐ b) Protein synthesis ☐

c) Function of microtubule ☐ d) RNA synthesis ☐

8) Amantidine used as antiviral agent by inhibiting _____

a) Uncoating of the influenza ☐ b) RNA synthesis ☐

c) Xanthine oxidase ☐ d) DNA gyrase ☐

9) _____ is starting material for synthesis of para amino salicylic acid.

a) 4-methyl pyridine ☐ b) m-nitrophenol ☐

c) Aniline ☐ d) ethyl propionate ☐

10) _____ is starting material for synthesis of chloroquine

a) Bromoaniline ☐ b) Paracetamol ☐

c) m-Chloroaniline ☐ d) 1-Bromoadmantane ☐

11) _____ is starting material for synthesis of Nalidixic acid.

a) P-Nitrotoluene ☐ b) P-aminophenol ☐

c) Z-methyl pyridine ☐ d) Aniline ☐

12) _____ Azole derivative used as antifungal agent.

a) Ketoconazole ☐ b) Griseofulvin ☐

c) Flucytosin ☐ d) None of above ☐

13) Pyrimethamine used as antimalarial by inhibiting _____

a) Xanthine oxidase ☐

b) RNA synthesis ☐

c) Protease enzyme ☐

d) Dihydrofolic acid to tetrahydrofolate coenzyme ☐

14) Acyclovir act as antimalarial by inhibiting _____

a) RNA synthesis ☐ b) Reverse transcriptase ☐

c) Viral DNA synthesis ☐ d) Protein synthesis ☐

15) Sulfonamides are structural analogues of _____

a) Imiduzole ☐ b) Pyridine ☐

c) PABA ☐ d) Aniline ☐

16) Sulfonamide block net biosynthesis of _____

a) Choline esterase ☐ b) Folate coenzyme ☐

c) Mycolic acid ☐ d) DNA polymerase ☐

_____

SLR-G – 28

Seat No.	

B.Pharm. (Semester – VI) Examination, 2014
MEDICINAL CHEMISTRY – II

Day and Date : Saturday, 17-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – I

2. Answer **any four** : **16**

1) Write MOA and chemical name of Acyclovir and paraamino salicylic acid.
2) Explain in short Dapsone as antileprotic agent.
3) Classify antiviral agent. Explain Nucleoside derivatives as antiviral agent.
4) Give structure, chemical name and MOA of sparfloxacin.
5) Explain cyclophosphamide as prodrug.
6) Discuss folic acid inhibitor as antimalarial drug.

3. Solve the following : **16**

1) Classify antineoplastic agent. Explain alkylating agent used as antineoplastic agent.
2) Classify antimalarial drugs. Explain life cycle of parasite and drug acting on the various stages.

OR

2) Write the structure, chemical name MOA and synthesis of following :
   1) Isoniazide
   2) Amantadine
   3) Clotrimazole
   4) Chloroquine.

SECTION – II

4. Solve **any four** : **16**
   1) Explain indetail quinoline antibacterial agent.
   2) Classify antifungal agent. Give MOA of Clotrimazole and Griseofulvin.
   3) Write MOA and chemical name of Ethambutol and Ketoconazole.
   4) Explain antimetabolite as antineoplastic agent with example.
   5) Explain viral replication. Write a note on reverse transcriptase inhibitor.
   6) Classify antitubercular drug. Explain DOT
      (Direct observation therapy)

5. Solve the following : **16**
   1) Classify sulphonamide. Give SAR and MOA of sulphonamide.
   2) Explain 4-aminoquinoline and 8-amino quinoline as antimalarial agent.

      OR

   2) Give chemical name and synthesis of following :
      1) Ethionamide
      2) Methotrexate
      3) Primaquine
      4) Acyclovir.

Code No. **SLR-G – 29**

Seat No.	

Signature of Jr. Supervisor

Seat No. ____________ Centre ____________	For Office Use Only
Seat No. in words ____________________	Code No.

B.Pharmacy (Semester – VI) Examination, 2014
PHARMACEUTICAL ANALYSIS– IV

Day and Date : Tuesday, 20-5-2014 **Time : 10.00 a.m. to 1.00 p.m.** **Max. Marks : 80**

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

________ Examination ________

________ (Paper - ______)

For Office Use only
Code No.

MCQ/Objective Type Questions

Marks :16

I. Multiple Choice Questions : **16**

1) IR spectra is a plot of ____________

a) % absorbance against wave number

b) % transmittance against concentration

c) % absorbance against concentration

d) % transmittance against wave number

P.T.O.

2) If wavelength of radiation is 5μ then wave number corresponding to that radiation is

a) 4000 cm^{-1} ☐ b) 2000 cm^{-1} ☐

c) 1000 cm^{-1} ☐ d) 3000 cm^{-1} ☐

3) Gas cell which is used for sampling of gases in IR is made up of _____

a) Potassium bromide ☐ b) Potassium sulphide ☐

c) Potassium iodate ☐ d) None of the above ☐

4) The solvent not used in IR

a) $CHCl_3$ ☐ b) CCl_4 ☐

c) CS_2 ☐ d) H_2O ☐

5) Optical activity is concerned with _____

a) Plane polarized light ☐ b) Refractive index ☐

c) Ordinary light ☐ d) All of these ☐

6) Calibration of conductometer is carried out by using _____

a) 0.1 M KCl ☐ b) 0.1 M NaCl ☐

c) 0.1 M $AlCl_3$ ☐ d) None of these ☐

7) Dextrose injection IP is assayed by _____

a) Conductometry ☐ b) Polarography ☐

c) Polarimetry ☐ d) Refractometry ☐

8) In acid base titration which of electrode used as reference electrode is _____

a) Calomel electrode ☐ b) Glass electrode ☐

c) Silver chloride electrode ☐ d) Quinhydrone electrode ☐

9) Potentiometer is used to measure _____

a) Concentration ☐ b) EMF ☐

c) Conductance ☐ d) Temperature ☐

10) Potential of standard hydrogen electrode is _____

a) 0 ☐ b) 1 ☐

c) 10 ☐ d) 100 ☐

11) Faradic current is due to

a) High current ☐

b) Traces of impurities in electrolyte ☐

c) Low potential ☐

d) DME ☐

12) The parameter measurement in thermo gravimetry is

a) dm/dt ☐ b) Temperature difference ☐

c) Mass ☐ d) None of these ☐

13) The number of vibrational degree of freedom of carbon dioxide is

a) 2 ☐ b) 4 ☐

c) 6 ☐ d) 8 ☐

14) The Nernst glower rod is heated to produce IR radiation at _____°C.

a) 1500 ☐ b) 6000 ☐

c) 3000 ☐ d) 4000 ☐

15) The specific conductance of conductor is reciprocal of

a) Equivalent conductance ☐ b) Specific resistance ☐

c) Molar conductance ☐ d) All of these ☐

16) In TG temperature is measured by _____

a) Thermocouple ☐ b) Thermistor ☐

c) Thermometer ☐ d) All of these ☐

_____

SLR-G – 29

Seat No.	

B.Pharmacy (Semester – VI) Examination, 2014
PHARMACEUTICAL ANALYSIS – IV

Day and Date : Tuesday, 20-5-2014 Marks : 64
Time: 10.00 a.m. to 1.00 p.m.

SECTION – I

II. Solve **any four** : **(4×4=16)**

1) Write a note on sample holder and furnace used in TG.

2) What is DTA ? Explain thermogram of DTA.

3) How do you calibrate conductometer and pH meter ?

4) What is amperometry ? What is dead stop end point in amperometric titration ?

5) Give different types of TG. What are the advantages of TG 750 over other balances ?

6) Write a note on light sources used in IR spectrophotometer.

III. Solve the following : **(8×2=16)**

1) What are reference and indicator electrode ? Explain the working of saturated calomel electrode and glass electrode with suitable diagram.

2) Discuss the instrumentation of thermogravimetry.

OR

2) Define the terms conductance, specific conductance, specific resistance, equivalent conductance. Explain various applications of conductometry.

SECTION – II

IV. Solve **any four** : **(4×4=16)**

1) Enlist various types of detectors of IR and explain the working of thermocouple.

2) Explain cell constant, discuss the conductometric titration of strong acid against strong base.

3) How do instrumental parameters affect the thermogram in TG ?

4) Write a note on potentiometric titrations.

5) How you will determine solubility of sparingly soluble salt by conductometry ?

6) Explain instrumentation of polarimeter.

V. Solve the following : **(8×2=16)**

1) Discuss in detail optical rotatory dispersion and circular dichroism. Add a note on applications of circular dichroism.

2) What are requirements for vibration to be IR active ? Discuss factors affecting vibrational frequency.

OR

2) Discuss each part of polargram. Write a note on differential pulse polarography.

Code No. **SLR-G – 3**

Seat No.	

Signature of Jr. Supervisor

Seat No. ______________ **Centre** ______________	**For Office Use Only**
Seat No. in words ______________________	**Code No.**

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B.Pharm. (Sem. – I) Examination, 2014
BIOCHEMISTRY

Day and Date : Monday, 19-5-2014 Time : 10.00 a.m. to 1.00 p.m. Max. Marks : 80

Day & Date ______________ **Language of Answer** ______________

Examination ______________ **Paper No.** ______________

Subject ______________ **Section** ______________

Marks -	**Out of**
Signature of Examiner	

________ **Examination** ________

______________ **(Paper - ________)**

For Office Use only
Code No.

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1. **MCQ**

Marks :16

1) One of the following is not an aldose

a) Glucose ☐

b) Galactose ☐

c) Mannose ☐

d) Fructose ☐

P.T.O.

2) The nitrogenous base present in lecithin is _____

a) Choline ☐ b) Ethanolamine ☐

c) Inositol ☐ d) Serine ☐

3. The glycosaminoglycan that serves as an anticoagulant

a) Heparin ☐

b) Hyaluronic acid ☐

c) Chondroitin sulphate ☐

d) Dermatan sulfate ☐

4. Esterification of cholesterol occurs at carbon position

a) 1 ☐ b) 2 ☐

c) 3 ☐ d) 4 ☐

5. The carbon atoms involved in osacone formation

a) C_1 and C_2 ☐

b) C_2 and C_3 ☐

c) C_3 and C_4 ☐

d) C_5 and C_6 ☐

6. The number of double bonds present in arachidonic acid is _____

a) 1 ☐ b) 2 ☐

c) 3 ☐ d) 4 ☐

7. Synthesis of 2-3 Bisphosphoglycerate occurs in tissue namely _____

a) Liver ☐ b) Kidney ☐

c) Erythrocytes ☐ d) Brain ☐

8. The transport mechanism that requires energy is called as _____

a) Passive transport ☐

b) Active transport ☐

c) Osmosis ☐

d) Diffusion ☐

9. The following polysaccharide is composed of β glycosidic bonds _____

a) Starch ☐ b) Glycogen ☐

c) Dextrin ☐ d) Cellulose ☐

10. The number of ATP produced when a molecule of acetyl COA is oxidized through TCA cycle is _____

a) 12 ☐ b) 24 ☐

c) 38 ☐ d) 15 ☐

11. The connecting link between HMP shunt and lipid synthesis is _____

a) Ribose ☐ b) NADPH ☐

c) Xylulose ☐ d) NADH ☐

12. Transport of two substances in same direction is _____

a) Uniport ☐

b) Symport ☐

c) Antiport ☐

d) None of the above ☐

13. One of the following enzymes in glycolysis catalyses an irreversible reaction

a) Hexokinase ☐

b) Aldolase ☐

c) Phosphohexose isomerase ☐

d) Enolase ☐

14. Power house of cell is _____

a) Mitochondria ☐ b) Lysosome ☐

c) Golgi complex ☐ d) Ribosome ☐

15. Chylomicron is important in the transport of _____

a) Cholesterol ☐ b) Triglyceride ☐

c) Glucose ☐ d) Fructose ☐

16. Synthesis of Fatty acid occurs in

a) Mitochondria ☐ b) Cytoplasm ☐

c) Ribosome ☐ d) All of the above ☐

_____

SLR-G – 3

Seat No.	

B.Pharm. (Sem. – I) Examination 2014
BIOCHEMISTRY

Day and Date : Monday, 19-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – I

2. SAQ (Answer **any four**) : **16**
   1) Describe the structure and properties of lactose and maltose.
   2) Write a note on active, passive and facilitated transport processes.
   3) Draw a well labeled diagram of eukaryotic cell and write down the structure and functions of ribosomes.
   4) Write a note on essential fatty acids.
   5) Explain the structure of plasma membrane.
   6) Write a note on biological importance of carbohydrates.

3. LAQ : **16**
   1) What is glycolysis ? Enumerate the steps of glycolysis. Explain the energetics of glycolysis.
   2) Write in detail about classification of lipids with suitable examples.

   OR

   2) Describe the hexose monophosphate shunt and add a note on its significance.

SECTION – II

4. SAQ (Answer **any four**) : **16**
   1) Explain structure and functions of mitochondria and lysosomes.
   2) Write a note on mutarotation.

3) Describe the functions of lipids.

4) Describe the structure and functions of hyaluronic acid and chondroitin sulphates.

5) Explain the process of exocytosis and endocytosis.

6) Describe the structure and functions of lipoproteins.

5. LAQ : **16**

1) What is beta-oxidation ? Write fatty acid oxidation with respect to

   a) Fatty acid activation

   b) Transport of acyl COA into mitochondria

   c) Beta-oxidation reactions proper.

2) Give an account of glycogen synthesis. Add a note on it's regulation.

OR

2) Explain cholesterol synthesis in detail.

Code No. SLR-G – 30

Seat No.	

Signature of Jr. Supervisor

Seat No. _____ Centre _____	For Office Use Only
Seat No. in words _____	Code No.

- -

B.Pharmacy (Semester – VI) Examination, 2014
PHARMACOLOGY – II

Day and Date : Thursday, 22-5-2014 Time : 10.00 a.m. to 1.00 p.m. Max. Marks : 80

Day & Date _____	**Language of Answer** _____
Examination _____	**Paper No.** _____
Subject _____	**Section** _____

Marks -	Out of
Signature of Examiner	

_____ **Examination** _____

_____ **(Paper -** _____**)**

For Office Use only
Code No.

MCQ/ Objective Type Question Paper

Marks : 16

1. Multiple choice questions : **(1×16=16)**

1) _____ is not a thiazide and related Diuretics.

a) Xipamide ☐ b) Indapamide ☐

c) Metolazone ☐ d) Acetazolamide ☐

P.T.O.

2) Presence of food in stomach _____ absorption of digoxin as well as digitoxin.

a) Increases ☐ b) Not affect ☐

c) Not delays ☐ d) Delays ☐

3) _____ is called an 'inodilator'.

a) Amrinone ☐ b) Milrinone ☐

c) Dobutamine ☐ d) Other than a), b) and c) ☐

4) Verapamil belongs to _____

a) Na^+ channel blockers ☐ b) B blockers ☐

c) Calcium channel blockers ☐ d) Antiadrenergic agent ☐

5) Dose of Isosorbide dinitrate is _____

a) 0.4 – 0.8 mg sublingual spray ☐ b) 5 – 10 mg sub-lingual ☐

c) 5 – 15 mg oral ☐ d) 20 – 40 mg oral ☐

6) _____ drug having oral bioavailability is higher and more consistent.

a) Amlodipine ☐ b) Felodipine ☐

c) Nifedipine ☐ d) Diltiazem ☐

7) Which of the following is $\beta + \alpha$ Adrenergic blockers ?

a) Labetalol ☐ b) Carvedilol ☐

c) Both a) and b) ☐ d) None of a), b) and c) ☐

8) _____ is the proton pump inhibitor.

a) Omeprazole ☐ b) Misoprostol ☐

c) Famotidine ☐ d) Sucralfate ☐

9) Metodopramide acts through _____ receptors.

a) dopaminergic and serotonergic ☐

b) dopaminergic ☐

c) serotonergic ☐

d) other than a), b) and c) ☐

10) _____ is the example of osmotic purgative.

a) Isapghula ☐ b) Tegaserod ☐

c) Lactulose ☐ d) Castor oil ☐

11) Which drug is the bronchial decretion enhancers ?

a) Guaiphenesin ☐ b) Carbocisteine ☐

c) Terbutalin ☐ d) Pholcodeine ☐

12) _____ is mostly episodic, less prone to status asthmaticus.

a) Bronchial asthma ☐ b) Extrinsic asthma ☐

c) Intrinsic asthma ☐ d) Other than a), b) and c) ☐

13) 5-HT_3 antagonists drug suppress vomiting ?

a) Ondansetron ☐ b) Domperidone ☐

c) Haloperidol ☐ d) Cinnarizine ☐

14) All laxatives are contra indicated in _____

a) Undiagnosed abdomin pain ☐ b) Colic/vomiting ☐

c) Secondary constipation ☐ d) All above three ☐

15) Captopril is well tolerated by most patients especially if daily dose is kept below _____ mg.

a) 150 mg ☐ b) 5 – 20 mg ☐

c) 10 mg ☐ d) 20 – 40 mg ☐

16) Prehypertension systolic BP (mm Hg) is _____

a) 120 – 139 ☐ b) 140 – 159 ☐

c) < 120 ☐ d) ≥ 160 ☐

_____

SLR-G – 30

Seat No.	

B.Pharmacy (Semester – VI) Examination, 2014
PHARMACOLOGY – II

Day and Date : Thursday, 22-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – I

2. Answer **any four** of the following : **(4×4=16)**

   1) Explain mechanism of action and uses of Hydralazine drug as vasodilator.

   2) Give the adverse effects and contra indications of Heparin.

   3) Write a note on cyproheptadine and give its adverse effects.

   4) Discuss demulcents and expectorants with suitable example.

   5) What are the goals of antiulcer therapy ? Add mechanism of action of sucralfate.

   6) Define poison. Give pharmacological actions, adverse reactions of heavy metals.

3. Answer the following : **(8×2=16)**

   A) Discuss in detail the symptoms, first aid and principles of treatment of organophosphorus poisoning.

   B) Discuss the pharmacotherapy of Asthma.

   OR

   B) Classify Adrenolytics in detail with examples.

SECTION – II

4. Answer **any four** of the following : **(4×4=16)**
   1) Define Hypertension. Comment on the role of diuretics in the treatment of hypertension.
   2) Discuss in brief the pharmacology of Ranitidine.
   3) Write notes on the types of poisoning.
   4) Define shock and how shock can corrected.
   5) Classify Antihypertensive drugs with examples.
   6) Give classification of antidiarrhoeals with suitable examples.

5. Answer the following : **(8×2=16)**
   A) Classify antihistaminic drugs with examples. Add a note on their adverse effects.
   B) Discuss the pharmacology of Beta Blockers.

   OR

   B) Discuss the biosynthesis and physiological role of prostaglandins.

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Code No. SLR-G – 31

Seat No.	

Signature of Jr. Supervisor

Seat No. ____________ Centre ____________ Seat No. in words ____________	For Office Use Only Code No.

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B.Pharmacy (Semester – VI) Examination, 2014
CLINICAL PHARMACOLOGY

Day and Date : Saturday, 24-5-2014 **Time : 10.00 a.m. to 1.00 p.m.** **Total Marks : 80**

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

__________ Examination __________

__________ (Paper - ________)

For Office Use only
Code No.

Instructions : *1) To be answered in **first 20** minutes and returned to the Room Supervisor.*
*2) **All** questions are **compulsory**.*
*3) **Each** question carries **1** mark.*

MCQ/Objective Type Question Paper

Duration : 20 minutes Marks : 16

1. Choose the most appropriate answer from amongst the four choices for each of the following questions : **16**

1) Explaining Aims and Objectives, Duration, Possible Health Hazards, Trial Subject Rights, Long term risks and such information to a subject and making his willing, underwritten and lawful participation as a trial subject in clinical trial is called ______________

a) Patient Counseling ☐ b) Informed Consent ☐
c) Subject Agreement ☐ d) Selection ☐

P.T.O.

2) A toxic effect of a drug is

   a) Tolerable extension of beneficial effect ☐

   b) Tolerable unpleasant effect ☐

   c) Seriously harmful and excessive pharmacological effect of a drug due to overdosage or prolonged use ☐

   d) Due to non-palatability of dosage form leading to non-compliance ☐

3) Immediate Hypersensitivity Reactions are medicated by _____ antibodies.

   a) IgG ☐ b) IgM ☐

   c) IgE ☐ d) IgA ☐

4) The phenomenon of teratogenicity came into light for the first time, was due to

   a) Thalidomide ☐ b) Phenytoin ☐

   c) Nicotine ☐ d) Methotrexate ☐

5) TYPE B Adverse Drug Reactions are also called _____

   a) Unpredictable ☐ b) Bizarre ☐

   c) Both a) and b) ☐ d) None of these ☐

6) When nature of treatment is concealed from the subject or from both subject and investigator, such studies are called _____

   a) Cohort Studies ☐ b) Case Control Studies ☐

   c) Randomized Trials ☐ d) Blind Trials ☐

7) Dose reduction in elderly is needed because _____

a) Renal function progressively declines with age ☐

b) Drug metabolizing capacity of liver is reduced in elderly ☐

c) Liver blood flow is reduced in elderly ☐

d) All of the above ☐

8) An allergic reaction mediated by circulating antibodies is called _____ reactions.

a) Anaphylactic ☐ b) Cytolytic ☐

c) Arthus ☐ d) Delayed ☐

9) If DRC of a drug is positioned near Y (response) axis i.e. towards left, which of the following statement is true ?

a) The drug is highly potent ☐ b) The drug's potency is weak ☐

c) The drug has high efficacy ☐ d) The drug has low efficacy ☐

10) Recurrence of symptoms of a disease with increased intensity after withdrawal of a drug is called _____

a) Rebound ☐ b) Recurrence ☐

c) Relapse ☐ d) Remission ☐

11) Another name for the term " Tachyphylaxis' is _____

a) Dependence ☐ b) Subacute Tolerance ☐

c) Acute Tolerance ☐ d) Chronic Tolerance ☐

12) Stoppage of drug dose regimen for predetermined period is termed as _____

a) Non-Compliance ☐ b) Drug Tolerance ☐

c) Drug Holiday ☐ d) Drug Withdrawal ☐

13) _____ is an example of a disease induced by antipsychotic drugs.

a) Hepatitis ☐ b) Alzheimer's Disease ☐

c) Parkinson's Disease ☐ d) CHF ☐

14) Dose calculations is paediatric patients are based on _____

a) Body Weight ☐

b) Body Surface Area ☐

c) Gender ☐

d) Age ☐

15) _____ of the following drugs causes 'neural tube defects' in developing foetus.

a) Androgens ☐

b) ACE inhibitors ☐

c) Methotrexate ☐

d) Carbamazepine ☐

16) Study of use of genetic information to guide the choice of drug and dose for an individual patient is _____

a) Genetics ☐

b) Pharmacogenetics ☐

c) Pharmacogenomics ☐

d) Pharmacovigilance ☐

_____

SLR-G – 31

Seat No.	

B.Pharmacy (Semester – VI) Examination, 2014

CLINICAL PHARMACOLOGY

Day and Date : Saturday, 24-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

***Instructions** : 1) **All** questions are **compulsory**.*
*2) Figures to the **right** indicate **full** marks.*

SECTION – I

2. Answer **any four** of the following : **(4×4=16)**

i) Write a note on Meta-analysis.

ii) Summarize the factors contributing to occurrence of drug interactions.

iii) Define Clinical Pharmacokinetics and add a note on applications of Clinical Pharmacokinetics.

iv) Explain the term 'Informed Consent'.

v) Write a note on use of drugs in elderly.

vi) Comment on Assessment and Management of the following patient : "A moderate smoker at age 55, with family history of hypertension, Diabetes Mellitus and Obesity visits a physician complaining that he experiences tiredness while climbing a staircase of 20 steps to his apartment".

3. Answer the following : **(8×2=16)**

i) Write an elaborate account on different phases of Clinical Trials.

ii) Explain in detail the mechanisms of Pharmacokinetic and Pharmacodynamic interactions with appropriate examples.

OR

ii) What is 'Pharmacoepidemiology' ? Explain 'Case Control Studies' and Cohort Studies'.

SECTION – II

4. Answer **any four** of the following : **(4×4=16)**
   i) What is Chronic Obstructive Pulmonary Disease ? Write about treatment of COPD.
   ii) Write a note on Ethics of Research.
   iii) Write different sources of Adverse Drug Reactions.
   iv) Write a note on drug therapy in neonates.
   v) Explain the term 'Individualization of Drug Therapy'. In which cases Individualization of Drug Therapy is needed ?
   vi) What will be the consequences of Long Term Drug Administration ?

5. Answer the following : **(8×2=16)**
   i) Write in detail about 'Use of Drugs in Liver and Kidney Disease'.
   ii) What are adverse drug reactions ? Explain different types of adverse drug reactions in detail.

   OR

   ii) Discuss the management of Acute Myocardial Infarction in detail.

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Code No. **SLR-G – 32**

Seat No.	

Signature of Jr. Supervisor

Seat No. ______ Centre ______	For Office Use Only
Seat No. in words ______	Code No.

B.Pharm. (Semester – VI) Examination, 2014
PHARMACOGNOSY – II

Day and Date : Tuesday, 27-5-2014 Time : 10.00 a.m. to 1.00 p.m. Total Marks : 80

Day & Date ______	Language of Answer ______
Examination ______	Paper No. ______
Subject ______	Section ______

Marks -	Out of
Signature of Examiner	

______ Examination ______

______ (Paper - ______)

For Office Use only
Code No.

MCQ/Objective Question Paper

Marks : 16

1. Tick the correct answer : **(16×1=16)**

1) Ratio values are determined for confirmation of ________ crude drugs for their identity.

A) Seed ☐ B) Leaf ☐

C) Stem ☐ D) Flower ☐

2) Aromatic Amino Acids acts as primary precursor for formation of ______

A) Volatile oils ☐ B) Fixed oils ☐

C) Alkaloids ☐ D) Carbohydrates ☐

P.T.O.

3) Identify natural fiber obtained from mineral origin

A) Wool ☐ B) Jute ☐

C) Asbestos ☐ D) Nylon ☐

4) Arabic acid on hydrolysis produces _____

A) L-arabinose ☐ B) L-rhamnose ☐

C) D-galactose ☐ D) All of above ☐

5) _____ is mainly used in the treatment of cancer.

A) Benzoin ☐ B) Podophyllum ☐

C) Fennel ☐ D) Cannabis ☐

6) Condensed tannins shows _____ colour with ferric chloride solution.

A) Blue ☐ B) Green ☐

C) Black ☐ D) Bluish-black ☐

7) Identify the drug having cathartic action.

A) Castor oil ☐ B) Cod liver oil ☐

C) Arachis oil ☐ D) Shark liver oil ☐

8) Yellow colour of turmeric is due to _____

A) Camphene ☐ B) Zingiberene ☐

C) Curcumin ☐ D) None of above ☐

9) Anti viral action of neem is due to the presence of _____

A) Azadirachtin ☐ B) Nimbosterol ☐

C) Kaempferol ☐ D) Nimbin ☐

10) Fibroin on hydrolysis produces _____

A) Alanine and valine ☐

B) Alanine and cysteine ☐

C) Alanine and phenylalanine ☐

D) Alanine and glycine ☐

11) Amylose gives _____ colour with dilute iodine solution.

A) Red ☐ B) Blue ☐ C) Yellow ☐ D) Brown ☐

12) Stomatal number is the average number of stomata _____ of the epidermis of the leaf.

A) Per mm ☐ B) Per cm ☐

C) Per cube ☐ D) Per square mm ☐

13) _____ is an example of acid resins.

A) Colophony ☐ B) Sandrac ☐

C) Myrrh ☐ D) All of above ☐

14) The number of isoprene units present in triterpenoids are _____

A) Three ☐ B) Nine ☐

C) Six ☐ D) Twelve ☐

15) Which of the following parameter is used to determine identity and purity of fixed oils ?

A) Acid value ☐ B) Saponification value ☐

C) Iodine value ☐ D) All of above ☐

16) *Acacia chundra* belonging to family _____

A) Rubiaceae ☐ B) Combretaceae ☐

C) Leguminosae ☐ D) Euphorbiaceae ☐

SLR-G – 32

Seat No.	

B.Pharm. (Semester – VI) Examination, 2014
PHARMACOGNOSY – II

Day and Date : Tuesday, 27-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – I

2. Answer **any four** of the following questions : **(4×4=16)**

1) Define volatile oils. Write qualitative chemical tests used for detection of volatile oils.

2) Explain basic principle of camera lucida by illustrating the line diagram.

3) Write synonyms, biological source, chemical constituents and uses of starch.

4) How fixed oils are differentiated from volatile oils ?

5) Write the general biosynthetic pathway showing various secondary metabolites of medicinal value.

6) Define tannins. Write difference between hydrolysable tannins and condensed tannins.

3. Answer the following questions : **(2×8=16)**

1) Describe in detail pharmacognostic scheme of clove.

2) Write synonyms, biological source, chemical constituents and uses of any one crude drug :
   a) Having narcotic action
   b) Belonging to combretaceae family
   c) Obtained from seed part
   d) Having rhizome part.

OR

2) Define carbohydrates. Classify with suitable examples. Discuss the pharmacognosy of Agar.

SECTION – II

4. Answer **any four** of the following questions : **(4×4=16)**

   1) Explain general properties of tannins. Write its industrial applications.

   2) Write synonyms, biological source, chemical constituents and uses of cod liver oil.

   3) Write the importance of primary metabolites in formation of secondary metabolites with examples.

   4) Define natural pesticides. Write biological source, chemical constituents and uses of crude drug belonging to composite family.

   5) Classify natural fibers with suitable examples. Write its importance.

   6) Write identification tests used for pale catechu.

5. Answer the following questions : **(2×8=16)**

   1) Discuss in detail pharmacognostic scheme of fennel fruit.

   2) Classify resins with suitable examples. Compare and contrast between Sumatra benzoin and siam benzoin.

   OR

   2) What are stomata ? Classify with examples. Explain the different leaf constant in detail.

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B. Pharmacy (Semester – VII) Examination, 2014
STERILE DOSAGE FORMS

Day and Date : Monday, 12-5-2014 Time : 3.00 p.m. to 6.00 p.m. Max. Marks : 80

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

____________ Examination ____________

____________ (Paper - ________)

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Code No.

MCQ/Objective Type Questions

Marks : 16

1. Choose the appropriate answer from the following choices : **(1×16=16)**

   1) Spinal anaesthesia can be given by ______________ route.
      a) intra-spinal
      b) intra-peridural
      c) both a) and b)
      d) none of these

P.T.O.

2) The recommended tolerance limit for filling of sterile solids is _____

a) ± 10% ☐ b) ± 5% ☐

c) ± 20% ☐ d) 0% ☐

3) The task of documentation is carried out by _____

a) Documentation cell ☐

b) Drug Regulatory Affairs Department ☐

c) Both a) and b) ☐

d) None of these ☐

4) _____ are the metabolic byproducts of living or dead microorganisms that cause pyrexia upon injection.

a) anti-oxidants ☐

b) anti-microbial agents ☐

c) pyrogens ☐

d) none of these ☐

5) Type – II and Type – III glass contain nearly _____ of Calcium.

a) 0% ☐

b) 8% ☐

c) 81% ☐

d) 14% ☐

6) The title used on label for sterile injectable suspension of Chloramphenicol is _____

a) Sterile Chloramphenicol for Suspension ☐
b) Sterile Chloramphenicol Suspension ☐
c) Sterile Chloramphenicol for Injection ☐
d) Sterile Chloramphenicol ☐

7) Ionization radiations can be used for sterilization of _____

a) solutions ☐ b) bandages ☐
c) baby bottle nipples ☐ d) all of these ☐

8) The compatibility of drug products with containers can be evaluated by _____

a) LC/MS ☐ b) GC/MS ☐
c) ICP ☐ d) All of these ☐

9) Locational analysis for a plant include _____

a) site economics ☐ b) competitive analysis ☐
c) trade area analysis ☐ d) all of these ☐

10) A multiple dose sterile solution must contain _____

a) suspending agent ☐ b) sweetner ☐
c) preservative ☐ d) all of these ☐

11) High initial capital investment in special purpose machine is the disadvantage of _____ layout.

a) product ☐ b) process ☐
c) location ☐ d) all of these ☐

12) In class-I area _____ particles of size 0.5 μ /sq.ft. are allowed.

a) NMT 650 ☐ b) NMT 65 ☐
c) NMT 100 ☐ d) NMT 10000 ☐

13) _____ buffers are used in parenterals in the pH range of 7-9.

a) Phosphate ☐ b) Citrate ☐
c) Borate ☐ d) None of these ☐

14) _____ is the major disadvantage of preparation of sterile solids by aseptic crystallization.

a) batch to batch variability ☐

b) caking ☐

c) coagulation of proteins ☐

d) All of these ☐

15) Bacteriostatic Water for Injection is packaged in _____ containers not greater than _____ capacity.

a) single dose, one liter ☐

b) double dose, 500 ml ☐

c) multiple dose, 30 ml ☐

d) both a) and b) ☐

16) _____ guidelines provides scientific foundation for scale up and post approval changes required for formulation.

a) CPCSEA ☐

b) SUPAC ☐

c) Both a) and b) ☐

d) None of these ☐

_____

SLR-G – 33

Seat No.	

B. Pharmacy (Semester – VII) Examination, 2014
STERILE DOSAGE FORMS

Day and Date : Monday, 12-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

Instructions *:* • ***All*** *questions are* ***compulsory****.*
• *Figures to* ***right*** *indicate* ***full*** *marks.*

2. Answer **any four** : **16**
   a) Give official standards for water for injection I.P.
   b) Write a note on biological indicators used for validation of sterilization.
   c) What are the duties and responsibilities of pilot plant scale-up department ?
   d) Give an overview of preservatives used in sterile preparations.
   e) Write a note on Large Volume Parenterals.

3. Answer **any four :** **16**
   a) Write a note on averages to be added to sterile preparations.
   b) Write in brief about the essential characteristics of an ophthalmic product.
   c) Explain in detail how pH is important in maintaining stability of parenterals.
   d) Write a note on sterilization of filtration.
   e) What are the objectives of a plant layout study ?

4. Answer **any two** : **16**
   a) Write in detail different methods used for sterilization of parenterals with proper examples pertaining to different types of products and utensils.
   b) Explain with examples the method of scale-up validation.
   c) Discuss in detail the method of preparation of parenterals by FFS.

5. Answer **any two** : **16**
   a) How are parenterals prepared by aseptic processing ? Explain with example.
   b) Discuss the formulation aspects of ophthalmic products.
   c) Describe plastic as packaging material for parenterals.

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B.Pharm. (Semester – VII) Examination, 2014
PHARMACEUTICAL JURISPRUDENCE

Day and Date : Thursday, 15-5-2014 **Time : 3.00 p.m. to 6.00 p.m.** **Total Marks : 80**

Day & Date ______	Language of Answer ______
Examination ______	Paper No. ______
Subject ______	Section ______

Marks -	Out of
Signature of Examiner	

______ Examination ______

______ (Paper - ______)

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MCQ/Objective Question Paper

Marks : 16

I. MCQ : **16**

1) Drug controller of India is ________ member of pharmacy council of India.
   - A) An ex-officio
   - B) A nominated
   - C) A elected
   - D) None of above

2) The elected members of pharmacy council of India can hold the office for a period of ____________ years.
   - A) 5
   - B) 10
   - C) 15
   - D) None of above

P.T.O.

3) The state pharmacy councils are required to supply to the pharmacy council of India _____ copies of their register every year.

A) 5 ☐ B) 10 ☐

C) 15 ☐ D) None of above ☐

4) _____ means the flowering and fruiting tops of cannabis plant (excluding seeds and leaves) as per the Narcotics and Psychotropic Substances Act.

A) Ganja ☐ B) Charas ☐

C) Both A) and B) ☐ D) None of above ☐

5) Cultivation of cocoa plant is a controlled operation of the _____ govt.

A) State ☐ B) Central ☐

C) Both A) and B) ☐ D) None of above ☐

6) Drugs colored, coated or polished to conceal damage are called as _____ drugs as per the D and C Act.

A) adulterated ☐ B) misbranded ☐

C) both A) and B) ☐ D) none of above ☐

7) Drugs not having claimed therapeutic values are called as _____ drugs as per the D and C Act.

A) adulterated ☐ B) spurious ☐

C) misbranded ☐ D) none of above ☐

8) Anyone who imports a spurious drug which involves risk to the life of human beings shall be punished with imprisonment up to _____ years on first conviction as per the D and C Act.

A) 1 ☐ B) 3 ☐

C) 5 ☐ D) None of above ☐

9) No schedule _____ drugs should be supplied by way of physician's as per the D and C Act.

A) H ☐ B) J ☐

C) X ☐ D) None of above ☐

10) The caution "it is dangerous to take this preparation except under medical supervision" is given for schedule _____ drugs.

A) H ☐ B) C ☐

C) G ☐ D) None of above ☐

11) Director general of health services is _____ member of DTAB.

A) An elected ☐ B) Nominated ☐

C) An ex-officio ☐ D) None of above ☐

12) President, MCI is _____ member of DTAB.

A) An elected ☐ B) Nominated ☐

C) An ex-officio ☐ D) None of above ☐

13) There are no provisions for import of _____ drugs as per the D and C Act.

A) ayurvedic ☐ B) unani ☐

C) siddha ☐ D) all of above ☐

14) _____ is an ex-officio member of ayurvedic, unani and siddha DTAB.

A) President, PCI ☐

B) Director, AICTE ☐

C) Drug inspector ☐

D) Director general of health services ☐

15) Schedule _____ gives the life period of drugs.

A) H ☐ B) G ☐ C) M ☐ D) P ☐

16) The Pharmacy Act extends to the whole of India except _____

A) Mizoram ☐ B) Manipur ☐

C) Meghalaya ☐ D) Jammu and Kashmir ☐

_____

SLR-G – 34

Seat No.	

B.Pharm. (Semester – VII) Examination, 2014
PHARMACEUTICAL JURISPRUDENCE

Day and Date : Thursday, 15-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

II. Answer **any four** : **(4×4=16)**

1) How are the prices of bulk drugs in first and second schedule calculated as per DPCO ?

2) Discuss "EDUCATION REGULATIONS" as per the Pharmacy Act.

3) Explain the constitution of state pharmacy council and joint state pharmacy council.

4) Write the offences and penalties under the Narcotics and Psychotropic substances Act.

5) Write a note on "de-addiction centre" and "cultivation of opium" as per the Narcotics and Psychotropic Substances Act.

III. Answer **any four** : **(4×4=16)**

1) Enlist the objectives of prevention of Food Adulteration Act. Define the term food and adulterant as per the act.

2) Enlist the qualifications that are eligible for being appointed as a public analyst as per the prevention of Food Adulteration Act. What are the duties of public analyst ?

3) Explain the "exempted advertisement" as per the Drugs and Magic Remedies (objectionable advertisement) Act.

4) Write a note on loan licenses as per the D and C Act.

5) Write the offences and penalties related to the manufacture of drugs as per the D and C Act.

IV. Answer **any two** : **(8×2=16)**

1) Highlight the powers and procedure of food inspector as per the prevention of Food Adulteration Act.

2) Explain the classes of drugs that can be imported under a license or permit as per the D and C Act.

3) Discuss the classes of drugs that are prohibited to be sold or stocked as per the D and C Act.

V. Answer the **two** : **(8×2=16)**

1) Write the constitution and functions of DTAB. Add a note on drug control laboratories.

2) Enlist the qualifications that are eligible for being appointed as a drugs inspector as per the D and C Act. Describe the procedure of sampling of drugs by the drugs inspector.

3) Define the term “cosmetics” as per the D and C Act. Explain the classes of cosmetics that are prohibited to be imported as per the

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B.Pharm. (Semester – VII) Examination, 2014
MEDICINAL CHEMISTRY – III

Day and Date : Monday, 19-5-2014 **Time : 3.00 p.m. to 6.00 p.m.** **Max. Marks : 80**

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

____________ Examination ____________

____________ (Paper - ________)

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***Instruction** : **All** questions are **compulsory**.*

MCQ

I. Multiple choice questions : **(1×16=16)**

1) Theophylline is used as ____________ agent.
   a) CNS stimulant ☐ b) CNS depressant ☐
   c) Analgesic ☐ d) Anticonvulsant ☐

2) The probencid is used as ____________ agent.
   a) Antigout ☐ b) Antiulcer ☐
   c) Oral contraceptive ☐ d) Sedative ☐

P.T.O.

3) _____ is used as anti-emetic agent.

a) Ondanesteron ☐ b) Phenytoin ☐

c) Aspirin ☐ d) None ☐

4) _____ steroid has high salt retaining activity.

a) Aldosterone ☐ b) Phenylbutazone ☐

c) Omeprazole ☐ d) All ☐

5) Carbamazipine belong to _____ class of drug.

a) Barbiturates ☐ b) Succimide ☐

c) Iminostilbene ☐ d) None ☐

6) The _____ is nonsteroidal drug.

a) Estradiol ☐ b) Diethylstilbestrol ☐

c) Estrone ☐ d) Progesterone ☐

7) Dextromorphan is used as _____ agent.

a) Antitussive ☐ b) NSAID ☐

c) Anticonvulsant ☐ d) CNS stimulant ☐

8) The _____ benzodiazepine derivative contain triazole nucleus in its structure.

a) Alprozolam ☐ b) Diazepam ☐

c) Clonazepam ☐ d) None ☐

9) Fluxy mesterone is modification of _____

a) Estrone ☐ b) Progesterone ☐

c) Testosterone ☐ d) None ☐

10) NSAID is a class of which of the following drug ?

a) Acetaminophen ☐ b) Morphine ☐

c) Diaphenhydramine ☐ d) Imipramine ☐

11) Estrogen, progestin and testosterone contain _____ carbons in steroidal nucleus respectively.

a) C_{18} C_{21} C_{19} ☐ b) C_{18} C_{19} C_{21} ☐

c) C_{21} C_{18} C_{19} ☐ d) C_{19} C_{21} C_{18} ☐

12) Doxepin is used as _____ agent.

a) Tricyclic antidepressant ☐ b) Anticonvulsant ☐

c) Narcotic analgesic ☐ d) None of the above ☐

13) _____ is xanthine alkaloid.

a) Caffeine ☐ b) Papaverine ☐

c) Codeine ☐ d) Morphine ☐

14) Haloperidol is used as _____ agent.

a) Antipsychotic ☐ b) Analeptic ☐

c) Anticonvulsant ☐ d) None of the above ☐

15) Lansoprazole is used as _____ agent.

a) Proton pump inhibitor ☐ b) Anticonvulsant ☐

c) Sedative hypnotic ☐ d) None ☐

16) Piroxicam contains _____ nucleus.

a) Purine ☐ b) 1, 2 benzothiazine ☐

c) Pyrazolidine ☐ d) Indole ☐

_____

SLR-G – 35

Seat No.	

B.Pharm. (Semester – VII) Examination, 2014
MEDICINAL CHEMISTRY – III

Day and Date : Monday, 19-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

***Instruction** : **All** questions are **compulsory**.*

II. Answer **any four** : **(4×4=16)**

a) Classify barbiturates with examples and write the synthesis of pento barbital.

b) Add a note on hydantoin and write the synthesis of phenytoin.

c) Write about antipsychotic phenothiazines and write the synthesis of chlorpromazine.

d) Write the S.A.R. of H_1-antagonists.

e) Add a note on selective Cox-II inhibitors with examples.

III. Answer **any four** : **(4×4=16)**

a) Write the S.A.R. of barbiturates.

b) Add a note on oral contraceptives.

c) What are androgens ? Discuss the SAR of testosterone.

d) Add a note on antigout agents.

e) Write the structure and mechanism of action of amphetamine.

IV. Answer **any two** : **(2×8=16)**

a) Classify NSAIDS with examples. Write the mechanism of action of the conventional NSAIDS and write the synthesis of Ibuprofen.

b) Classify sedative and hypnotics. Write the S.A.R. of benzodiazepine and write the synthesis of diazepam.

c) Explain in detail about female sex hormones.

V. Answer **any two** : **(2×8=16)**

a) Add a note on development of narcotic antagonists with examples and write the synthesis of Heroin.

b) Write about the various approaches for the treatment of peptic ulcers and write the MAO of Omeprazole.

c) Add a note on adrenocorticoids.

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B.Pharmacy (Semester – VII) Examination, 2014
PHARMACEUTICAL ANALYSIS – V

Day and Date : Wednesday, 21-5-2014 **Time : 3.00 p.m. to 6.00 p.m.** **Total Marks : 80**

Day & Date ____________	**Language of Answer** ____________
Examination ____________	**Paper No.** ____________
Subject ____________	**Section** ____________

Marks -	**Out of**
Signature of Examiner	

__________ **Examination** __________

__________ **(Paper -** ______**)**

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MCQ/Objective Question Paper

Marks : 16

I. Objective type question/MCQ : **(1×16=16)**

1) Whatmann paper is composed of ____________ % α-cellulose.

a) 90% ☐ b) 80% ☐

c) 99% ☐ d) 85% ☐

P.T.O.

2) The commonly used detecting reagent for amino acids is _____

a) Mayers reagents ☐ b) Chloroform and sulfuric acid ☐

c) Ninhydrin ☐ d) All the above ☐

3) In HPTLC sample is applied as _____

a) Bands ☐ b) Spots ☐

c) Rectangles ☐ d) All of the above ☐

4) The commonly used particle size of stationary phase in TLC is _____

a) 1 – 25 μ m ☐ b) 200 mm ☐

c) 10^2 μ m ☐ d) $10^2 - 10^6$ μ m ☐

5) Which one of the following is true for reversed phase chromatography ?

a) Stationary phase is polar ☐

b) Stationary phase is non-polar ☐

c) Mobile phase is non-polar ☐

d) None of the above ☐

6) Gradient elution technique involves use of eluent with

a) No change in polarity ☐ b) Change in polarity ☐

c) Single eluent ☐ d) None of the above ☐

7) Electron capture detector detects molecules which have affinity to _____

a) Protons ☐ b) Neutrons ☐

c) Electrons ☐ d) All the above ☐

8) C18 stationary phase is employed in _____

a) HPLC ☐ b) GC ☐

c) HPTLC ☐ d) Gel chromatography ☐

9) _____ is not the detector used in GC.

a) ECD ☐ b) FID ☐

c) TCD ☐ d) Refractive index detector ☐

10) The chromatographic principle was first discovered by _____

a) Synge ☐ b) Tswett ☐

c) Fleming ☐ d) Van Deemter ☐

11) Which of the following is more polar ?

a) Benzene ☐ b) Methanol ☐

c) Water ☐ d) Pet ether ☐

12) Which is not the adsorbent used in TLC ?

a) Kieselguhr ☐ b) Silica Gel ☐

c) Calcium Sulfate ☐ d) Alumina ☐

13) _____ is not the ascending chromatography.

a) Paper Chromatography ☐ b) Column Chromatography ☐

c) TLC ☐ d) HPTLC ☐

14) Wheatstone bridge based detector is used in _____

a) HPTLC ☐ b) HPLC ☐

c) Gel Chromatography ☐ d) GC ☐

15) Optimum particle size of analytical HPLC columns _____

a) 10 μ m ☐ b) 15 μ m ☐

c) 5 μ m ☐ d) 100 μ m ☐

16) In cationic ion exchange resins the important functional moiety is _____

a) Sulfonic acid group ☐

b) Alkyl groups ☐

c) Quaternary ammonium group ☐

d) Amine salts ☐

_____

SLR-G – 36

Seat No.	

B. Pharmacy (Semester – VII) Examination, 2014
PHARMACEUTICAL ANALYSIS – V

Day and Date : Wednesday, 21-5-2014 Marks : 64

Time : 3.00 p.m. to 6.00 p.m.

II. Answer **any four each** carry **four** marks : **(4×4=16)**

1) Define and classify chromatography.
2) Explain briefly the preparation of TLC plates.
3) Write a note on carrier gases used in GC.
4) Write the applications of HPTLC.
5) List out the detectors used in HPLC and explain in detail with diagram any one.

III. Answer **any four each** carry **four** marks : **(4×4=16)**

6) How do you select solvents in chromatography ?
7) Highlight the pharmaceutical applications of HPLC.
8) What is the principle involved in adsorption chromatography and explain in brief adsorbents used ?
9) Define the terminologies, retention time, gradient elution, retention volume, Rf value.
10) How TLC is different from HPTLC ?

IV. Answer **any two each** carry **eight** marks : **(8×2=16)**

11) Draw neat labeled diagram of gas chromatography and explain in detail detectors used in GC.

12) What is the principle involved in ion exchange chromatography ? White in detail the resins used and mention the applications of ion exchange chromatography.

13) Draw a neat labelled diagram of HPLC and explain pumps used in HPLC.

V. Answer **any two each** carry **eight** marks : **(8×2=16)**

14) Write a note on gel chromatography.

15) Summarize the principle and technique involved in paper chromatography and mention its applications.

16) Define HETP and explain its significance. What are the factors which influence HETP ?

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B.Pharmacy (Semester – VII) Examination, 2014
PHARMACOLOGY – III

Day and Date : Friday, 23-5-2014 Time : 3.00 p.m. to 6.00 p.m. Max. Marks : 80

Day & Date ______	Language of Answer ______
Examination ______	Paper No. ______
Subject ______	Section ______

Marks -	Out of
Signature of Examiner	

______ Examination ______

______ (Paper - ______)

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MCQ/ Objective Type Questions

Marks : 16

1. Multiple choice questions : **(1×16=16)**

1) Glutamate is ______ type of neurotransmitter.

a) Monoamine

b) Amino acid

c) Catecholamine

d) Peptide

P.T.O.

2) GABA is _____ type of neurotransmitter.

a) Inhibitory ☐ b) Excitatory ☐

c) Cotransmitter ☐ d) All of these ☐

3) Schizophrenia is a _____

a) Functional disorder ☐ b) Effective disorder ☐

c) Neurosis ☐ d) All of these ☐

4) Which of the following is a rare but serious adverse effect of Halothane in susceptible individuals ?

a) Myelosupression ☐

b) Malignant Hyperthermia ☐

c) GI Bleeding ☐

d) Hemolysis ☐

5) Which following drug blocks the reuptake of dopamine ?

a) Haloperidol ☐ b) Clozapine ☐

c) Amphetamine ☐ d) Diazepam ☐

6) Predominantly NA reuptake inhibitor is _____

a) Dothiepin ☐

b) Citalopram ☐

c) Desipramine ☐

d) Imipramine ☐

7) The following statements are true for Tricyclic Antidepressants, except

a) They are capable of producing tachycardia and other arrhythmias by potentiating Nor-adrenaline ☐

b) They produce anticholinergic adverse effects like dry mouth, blurred vision, constipation etc. ☐

c) They suppress REM sleep and reduce the night time awakenings ☐

d) They stimulate α -receptors on vascular smooth muscles and produce the hypertension ☐

8) Which one of the following agent is preferred in the treatment of Parkinson's Disease ?

a) Isoproterenol ☐ b) Levodopa ☐

c) Ephedrine ☐ d) Albuterol ☐

9) Which of the following Antiepileptic drug is a cyclic GABA analogue ?

a) Gabapentin ☐

b) Phenobarbital ☐

c) Clonazepam ☐

d) Tiagabin ☐

10) _____ of the following is a specific inhibitor of Alcohol Dehydrogenase ?

a) Disulfiram ☐ b) Fomepizol ☐

c) Naloxone ☐ d) Pargyline ☐

11) Use of Carbamazepine in pregnant women carries the risk of _____

a) Neural Tube Defects ☐

b) Fetal Bone abnormalities ☐

c) Phocomelia ☐

d) None of these ☐

12) Which of the following is a non-selective COX inhibitor ?

a) Aspirin ☐ b) Nimesulide ☐

c) Meloxicam ☐ d) Celecoxib ☐

13) Which one of the statement is correct for Regular Insulin ?

a) It is a buffered solution of unmodified insulin stabilized by small amount of zinc

b) It contains excess of protamine, so that the complex all insulin released more slowly

c) Protamine is added in quantity just sufficient to complex all insulin molecules along with pH neutral

d) None of these

14) Thiazolidinediones act on _____

a) ATP sensitive K+ channel

b) Nuclear Peroxisome Proliferator Activated Receptor-γ (PPAR-γ)

c) $H^+ - K^+$ ATPase Pump

d) All of these

15) Calcitonin causes hypocalcaemia by _____

a) Decreasing renal tubular reabsorption of Calcium

b) Inhibiting Osteolysis

c) Decreasing Renal Tubular Reabsorption of Phosphate

d) Inhibiting bone resorption

16) *Haemophilus influenza* type-B vaccines are prepared from _____

a) Live bacteria or viruses

b) Bacterial toxoids

c) Killed bacteria or viruses

d) All of these

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SLR-G – 37

Seat No.	

B.Pharmacy (Semester – VII) Examination, 2014
PHARMACOLOGY – III

Day and Date : Friday, 23-5-2014 Marks : 64

Time : 3.00 p.m. to 6.00 p.m.

2. Answer **any four** : **(4×4=16)**

   a) What are Neurohumoral Transmitters ? Enlist Excitatory and Inhibitory Neurotransmitters in CNS.

   b) Discuss Aversive Treatment of Alcohol Dependence.

   c) Describe stages of ether anaesthesia briefly.

   d) Why Levodopa is used in combination with Carbidopa in the management of Parkinson's disease ?

   e) Differentiate between sedatives and hypnotics.

3. Answer **any four** : **(4×4=16)**

   a) Classify antidepressant drugs with examples.

   b) What are atypical antipsychotics ? Explain.

   c) Define and classify Vaccines. Add a note on Bacterial Vaccines.

   d) Classify immunosuppressants with examples. Write adverse effects and uses of cyclosporine.

   e) Write a brief note on anti-infertility drugs.

4. Answer **any two** : **(8×2=16)**

   a) Classify antiepileptic drugs with examples. Add a note on pharmacology of phenytoin.

   b) What are opioid analgesics ? Classify them. Write mechanism of action, adverse effects and uses of morphine.

   c) Define and classify thyroid inhibitors add a note on propylthiouracil.

5. Answer **any two** : **(8×2=16)**

   a) Write physiological role of insulin. Write an extensive account of insulin preparations.

   b) What are estrogens ? Describe pharmacology of estrogens in detail.

   c) Classify oral hypoglycemics with examples. Add a note on sulfonylureas.

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Code No. **SLR-G – 38**

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B.Pharmacy (Semester – VII) IExamination, 2014
PHARMACOGNOSY – III

Day and Date : Monday, 26-5-2014 Time : 3.00 p.m. to 6.00 p.m. Total Marks : 80

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

__________ Examination __________

______________ (Paper - ________)

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Code No.

***Note** : Figures to **right** indicate **marks**.*

MCQ/Objective Type Questions

Marks : 16

1. Multiple Choice Questions (MCQ)/Objective Type Questions : **(1×16=16)**

   1) Opium alkaloids are the salts of
      a) Quinic acid
      b) Oleic acid
      c) Meconic acid
      d) Oxalic acid

P.T.O.

2) In the Cardenolide, lactone ring contains number of double bond

a) One ☐ b) Two ☐

c) Three ☐ d) Four ☐

3) Enzymes show maximum activity at temperature

a) 35° – 40°C ☐ b) 25° – 35°C ☐

c) 20° – 25°C ☐ d) 15° – 20°C ☐

4) Ergot under UV shows fluorescence

a) Yellow ☐ b) Red ☐

c) Blue ☐ d) Green ☐

5) The polyphenols derived from tea plant ***Camellia sinensis***

a) Ginkgo ☐ b) Green Tea ☐

c) Citrus peel ☐ d) Soya bean ☐

6) Aloin from Aloe contains type of glycosides

a) S-glycoside ☐ b) N-glycoside ☐

c) O-glycoside ☐ d) C-glycoside ☐

7) Which one of the following anticancer marine drug activates the protein kinase and arachidonic acid metabolite release ?

a) Bryostatin ☐ b) Ara – C ☐

c) Aplysistatin ☐ d) Asperidol ☐

8) Which one of the following alkaloid is liquid in nature ?

a) Nicotine ☐ b) Connine ☐

c) Emetine ☐ d) Quinine ☐

9) Senna leaf is under the class of glycoside

a) Cardiac ☐ b) Cynogenetic ☐

c) Anthraquinone ☐ d) Saponin ☐

10) Cinchona alkaloids are the salts of

a) Meconic acid ☐ b) Oxalic acid ☐

c) Quinic acid ☐ d) Tropic acid ☐

11) Plant pigments that are largely responsible for colors of many fruits and flowers

a) Tannin ☐ b) Bioflavonoids ☐

c) Chlorophyll ☐ d) None of the above ☐

12) Which drug is under the chemical class of Cynogenetic glycoside ?

a) Bitter Almond ☐ b) Digitalis ☐

c) Black Mustard ☐ d) Squill ☐

13) Indian tobacco used as respiratory stimulant is obtained from _____

a) Ephedra ☐ b) Vasaka ☐

c) Tulsi ☐ d) Lobelia ☐

14) Bromelin is used in the treatment of

a) Meat tenderizer ☐

b) Anti-inflammatory of soft tissue ☐

c) Thrombotic disorder ☐

d) Burns ☐

15) *Sinus alba*' is the source of

a) Brown mustard ☐ b) Black mustard ☐

c) White mustard ☐ d) All of the above ☐

16) Which one among the following crude drug obtained from the latex ?

a) Papaya ☐ b) Ephedra ☐

c) Cinchona ☐ d) Opium ☐

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SLR-G – 38

Seat No.	

B.Pharmacy (Semester – VII) Examination, 2014

PHARMACOGNOSY – III

Day and Date : Monday, 26-5-2014 Total Marks : 64

Time : 3.00 p.m. to 6.00 p.m.

***Note** : Figures to **right** indicate **marks**.*

2. Answer **any four** : **(4×4=16)**

   a) What are Bioflavonoids ? Give biological source and uses of Green tea.

   b) Write a note on Streptokinase.

   c) Define glycoside. Classify with examples.

   d) What are Indole alkaloids ? Give examples. Write one important structure of Indole alkaloids.

   e) Give example of cardiovascular marine drug along with uses.

3. Answer **any four** : **(4×4=16)**

   a) Define Marine drugs. Classify with example.

   b) Write in short about Urokinase.

   c) Write a note on Alkaloidal amines.

   d) Give the chemical constituents and uses of Bitter Almond.

   e) Explain in brief about Ginkgo leaves with respect to its medicinal uses.

4. Answer **any two** : **(8×2=16)**

   a) What are Tropane alkaloids ? Give examples. Write the biosynthetic pathway of Tropane alkaloid leading to formation of Hyoscyamine.

   b) What are Cardio active Glycosides ? Write Pharmacognosy of Digitalis.

   c) Give biological source, method of preparation and uses of Serratiopeptidase.

5. Answer **any two** : **(8×2=16)**

   a) Name the drug containing Reserpine and describe its pharmacognosy.

   b) Discuss the crude drug Aloe under Pharmacognostical scheme.

   c) Give the biological source, family, chemical constituents and uses of :

      i) Ipecac

      ii) Liquorice.

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B. Pharmacy (Semester – VIII) Examination, 2014
NOVEL DRUG DELIVERY SYSTEMS

Day and Date : Tuesday, 13-5-2014 Time : 3.00 p.m. to 6.00 p.m. Total Marks : 80

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

________ Examination ________

________ (Paper - ______)

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Code No.

MCQ/Objective Type Questions

Marks : 16

I. Choose the appropriate answer from the following choices : **(1×16=16)**

1) Soft, flexible and hydrophilic contact lenses contain ____________
   a) PMMA
   b) HEMA
   c) Silicone derivatives
   d) All of above

P.T.O.

2) Nitromethane is added as stabilizer in aerosols containing _____
   a) Propellant 111 + Methanol
   b) Propellant 114 + Water
   c) Propellant 22 + Water
   d) Propellant 11 + Ethanol

3) BCS class-IV drugs possess _____
   a) Low solubility and low permeability
   b) High solubility and low permeability
   c) Low solubility and high permeability
   d) High solubility and high permeability

4) It is practically not possible to get zero order release in oral CRDDS except for _____
   a) Osmotic pumps
   b) Matrix tablets
   c) Ion exchange resins
   d) None of these

5) _____ coating can be applied to increase pressure resistance of glass containers.
   a) Ethyl cellulose
   b) Polyvinyl cellulose
   c) Polyvinyl alcohol
   d) None of these

6) _____ can be added in OROS to improve drug release of poorly soluble drugs.
   a) Tonifier
   b) Osmogen
   c) Buffer
   d) Plasticizer

7) The metered dose aerosol does not contain _____
   a) Dip tube
   b) Stem
   c) Actuator stem
   d) Valve seat

8) Enteric coated tablets are examples of _____ release systems.
   a) Sustained ☐ b) Delayed ☐
   c) Slow and continuous ☐ d) Fast ☐

9) Absorption under the influence of electric current is called as _____
   a) Tonophoresis ☐ b) Sonophoresis ☐
   c) Chlorophoresis ☐ d) None of these ☐

10) If in an aerosol the aqueous product is not miscible with the liquefied propellant, it forms _____
   a) One phase system ☐ b) Two phase system ☐
   c) Three phase system ☐ d) None of these ☐

11) _____ pH range is most unsuitable for bioadhesion.
   a) 4 – 7 ☐ b) 1 – 3 ☐
   c) Both a) and b) ☐ d) None of these ☐

12) As a general rule _____ produce more stable multiple emulsions.
   a) Mineral oils ☐ b) Volatile oils ☐
   c) Fixed oils ☐ d) All of these ☐

13) Psia = _____
   a) Psig – 14.7 ☐ b) Psig + 14.7 ☐
   c) 14.7 – Psig ☐ d) None of these ☐

14) Microencapsulation can be achieved by _____
   a) Solvent evaporation method ☐
   b) Electrostatic method ☐
   c) Interfacial polymerization method ☐
   d) All of these ☐

15) _____ aerosol systems contain highest amount of water.
   a) One phase ☐ b) Two phase ☐
   c) Three phase ☐ d) Four phase ☐

16) Alginates are example of _____ type of polymers.
   a) Hydrophilic ☐ b) Hydrophobic ☐
   c) Both a) & b) ☐ d) None of these ☐

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Seat No.	

B. Pharmacy (Semester – VIII) Examination, 2014
NOVEL DRUG DELIVERY SYSTEMS

Day and Date : Tuesday, 13-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

Instructions *:* • ***All*** *questions are* ***compulsory****.*
• *Figures to* ***right*** *indicate* ***full*** *marks.*

II. Answer **any four** : **16**

1) What are the benefits of transdermal drug delivery systems ?
2) When is dissolution test important ?
3) Give the labeling requirement for pharmaceutical aerosols.
4) Explain the concept of loading and maintenance dose.
5) Write a note on solution aerosols.

III. Answer **any two** : **16**

1) Describe the design of a metered-dose pharmaceutical aerosol.
2) Give strategies to develop oral modified drug delivery systems. Discuss the design of dissolution controlled systems.
3) Describe the Q. C. tests to evaluate performance of pharmaceutical aerosols.

IV. Answer **any four** : **16**

1) Discuss different classes of polymers used in the design of oral CRDDS.
2) Classify propellants. Explain in detail about liquefied propellants.
3) Give the principle involved in any externally modulated system.
4) Describe the prominent biological parameters to be considered for the design of oral CRDDS.
5) Write a note on dry powder aerosols.

V. Answer **any two** : **16**

1) Describe the official methods used to evaluate modified release dosage forms.
2) Explain the important physicochemical properties of liquefied propellants. How are they numbered ?
3) Develop a formula for Floating drug delivery. Give logical reasoning for selection of excipients in the formula.

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B.Pharm. (Semester – I) Examination, 2014
ANATOMY,PHYSIOLOGY AND HEALTH EDUCATION– I

Day and Date : Wednesday, 21-5-2014 Time : 10.00 a.m. to 1.00 p.m. Total Marks : 80

Day & Date _____ Language of Answer _____
Examination _____ Paper No. _____
Subject _____ Section _____

Marks -	Out of
Signature of Examiner	

_____ Examination _____

_____ (Paper - _____)

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Code No.

Marks : 16

1. **MCQ :**

1) Increase in heart rate is termed as

A) Tachycardia ☐ B) Bradycardia ☐

C) Tachypnea ☐ D) Hypercardia ☐

P.T.O.

2) Difficulty in breathing is called as

A) Eupnea ☐ B) Dyspnea ☐

C) Tachypnea ☐ D) Apnea ☐

3) Bi-lobed nucleus is observed in

A) Neutrophil ☐ B) Eosinophils ☐

C) Erythrocytes ☐ D) Lymphocytes ☐

4) Normal stroke volume is

A) 70 ml ☐ B) 1000 ml ☐

C) 1740 ml ☐ D) 5020 ml ☐

5) Lymph capillaries are present in

A) CNS ☐ B) Splenic pulp ☐

C) Bone marrow ☐ D) Small intestine ☐

6) Adam's apple means

A) Thyroid cartilage ☐ B) Epiglottis ☐

C) Cricoid cartilage ☐ D) Larynx ☐

7) Formation of blood cells is known as

A) Haemostasis ☐ B) Homeostasis ☐

C) Hemopoiesis ☐ D) Haemolysis ☐

8) Largest organ in lymphatic system is

A) Spleen ☐ B) Lymph nodule ☐

C) Lymph Node ☐ D) Liver ☐

9) T-wave in ECG represents

A) Atrial contraction ☐ B) Atrial relaxation ☐

C) Ventricular contraction ☐ D) None of the above ☐

10) Clotting factor IV is

A) Fibrinogen ☐ B) Prothrombinase ☐

C) Calcium ion ☐ D) Charismas factor ☐

11) Protein is digested in stomach by enzyme

A) Pepsin ☐ B) Trypsin ☐

C) Chymotrypsin ☐ D) Pepsinogen ☐

12) Mucus is secreted by

A) Chief cells ☐ B) Goblet cells ☐

C) T-cells ☐ D) M-cells ☐

13) Left AV valve is also known as

A) Semilunar valve ☐ B) Mitral valve ☐

C) Tricuspid valve ☐ D) Fossa ovalis ☐

14) Trachea divides into two primary bronchi at _____

A) Epiglottis ☐ B) Carina ☐

C) Alveoli ☐ D) Cricoid cartilage ☐

15) Person with blood group A + ve can donate blood to person with _____ blood gp.

A) AB + ve ☐ B) B + ve ☐

C) O + ve ☐ D) All of above ☐

16) Sphincter between esophagus and stomach is known as

A) Cardiac sphincter ☐ B) Ileo-cecal sphincter ☐

C) Upper esophageal sphincter ☐ D) None of above ☐

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SLR-G – 4

Seat No.	

B.Pharm. (Semester – I) Examination, 2014
ANATOMY, PHYSIOLOGY AND HEALTH EDUCATION – I

Day and Date : Wednesday, 21-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – I

2. Answer **any 4** : **(4×4=16)**
   1) Define :
      a) Respiration
      b) Ventilation
      c) Vital Capacity
      d) Tidal Volume.
   2) Enlist functions of lymphatic system. Give composition of lymph.
   3) Draw a neat labeled diagram of electrical conduction system of heart.
   4) Define :
      a) Cardiac cycle
      b) Stroke volume
      c) Heart rate
      d) Cardiac output.
   5) Write a note on bronchial tree.
   6) Describe normal Electrocardiogram.

3. Answer the following : **(8×2=16)**
   1) Write a note on mechanics of Pulmonary ventilation.
   2) Describe events in Cardiac Cycle.

      OR

   2) Enlist different functions of GIT. Describe the anatomy of stomach and small intestine.

SECTION – II

4. Answer **any 4** : **(4×4=16)**
   1) Define :
      a) Anemia
      b) Leucocytosis
      c) Leucopenia
      d) Hemophilia.
   2) Draw a neat labeled diagram of Lymph node.
   3) Give composition and the functions of blood.
   4) Enlist the functions of Liver.
   5) Write a note on blood grouping systems.
   6) Draw labeled diagram of pancreas. Enlist its exocrine secretions.

5. Answer the following : **(8×2=16)**
   1) Describe the process of Haemostasis process.
   2) Give complete account of Digestion of carbohydrates, proteins and fats in GIT.

      OR

   2) Describe the regulation of cardiac output in detail.

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B.Pharmacy (Sem. – VIII) Examination, 2014
PHARMACEUTICAL BUSINESS MANAGEMENT

Day and Date : Saturday, 17-5-2014 Time : 3.00 p.m. to 6.00 p.m. Max. Marks : 80

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

________ Examination ________

____________ (Paper - ______)

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Code No.

MCQ/ Objective Type Questions

Marks : 16

I. MCQ : **16**

1) ____________ is the oldest form of business organization.
   A) Sole proprietorship ☐ B) Partnership ☐
   C) Co-operative Society ☐ D) None of the above ☐

2) ________ are the persons who provide a link between the manufacturers and the consumers.
   A) Retailers ☐ B) Wholesalers ☐
   C) Both A) and B) ☐ D) None of the above ☐

P.T.O.

3) _____ comes in direct contact with the consumers.

A) Retailers ☐ B) Stockists ☐

C) Super stockist ☐ D) None of the above ☐

4) _____ is the obligation to do something.

A) Delegation ☐ B) Responsibility ☐

C) Both A) and B) ☐ D) None of the above ☐

5) Primary data of marketing research is collected from _____

A) Dealers ☐ B) Consumers ☐

C) Salesman ☐ D) All of the above ☐

6) The partnership agreement may be _____ between the persons joining together in partnership.

A) Oral ☐ B) Written ☐

C) Both A) and B) ☐ D) None of the above ☐

7) A _____ partner does not take any active part in the management of the firms business.

A) Active ☐ B) Sleeping ☐

C) Both A) and B) ☐ D) None of the above ☐

8) A firm enjoys maximum control over price under _____

A) Monopoly ☐

B) Perfect competition ☐

C) Both A) and B) ☐

D) None of the above ☐

9) _____ is an organized approach for accomplishment of pre-determined objectives.

A) Direction ☐ B) Controlling ☐

C) Planning ☐ D) None of the above ☐

10) _____ is a middleman between a wholesaler and the actual consumer.

A) Retailer ☐ B) C and f agent ☐

C) Super stockist ☐ D) None of the above ☐

11) _____ is the right to do something or to tell someone else what to do.

A) Responsibility ☐ B) Authority ☐

C) Both A) and B) ☐ D) None of the above ☐

12) The advertisement of drugs in schedule H of D and C Act, 1940 is targeted to the _____

A) Physician ☐ B) Patient ☐

C) Both A) and B) ☐ D) None of the above ☐

13) The outdoor advertising includes _____ display.

A) Poster ☐ B) Billboard ☐

C) Electrical ☐ D) All of the above ☐

14) The liability of the _____ is unlimited.

A) Sole proprietor ☐ B) Joint Stock Company ☐

C) Both A) and B) ☐ D) None of the above ☐

15) A _____ marketing strategy consists of launching the new product at a high price and a high promotion level.

A) Rapid skimming ☐ B) Rapid penetration ☐

C) Slow-penetration ☐ D) None of the above ☐

16) Communication can be _____

A) Written ☐ B) Oral ☐

C) Verbal ☐ D) All of the above ☐

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SLR-G – 40

Seat No.	

B.Pharmacy (Sem. – VIII) Examination, 2014
PHARMACEUTICAL BUSINESS MANAGEMENT

Day and Date : Saturday, 17-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

II. Answer **any four** : **(4×4=16)**

1) Write a note on directing and controlling aspects of management.
2) Explain the basic principles of co-ordination.
3) Discuss product life cycle.
4) What are the obstacles to delegation of authority ?
5) Discuss sole proprietorship as a form of business organization.

III. Answer **any four** : **(4×4=16)**

1) Explain the role of professional sales representative in the marketing of drug formulations.
2) Write a note on market consideration in product development.
3) Explain the selection and training of professional sales representatives.
4) Highlight the functional organization.
5) Discuss the line organization.

IV. Answer **any two** : **(8×2=16)**

1) Explain the functions of management.
2) Discuss Taylor's functional organization.
3) Compare and contrast between partnership and co-operative organization.

V. Answer **any two** : **(8×2=16)**

1) Explain the salient features of "wholesaler" as a channel of distribution. Enlist its advantages and disadvantages.
2) Describe marketing research procedure in detail.
3) Discuss in detail the "planning process".

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B.Pharmacy (Semester – VIII) Examination, 2014

MEDICINAL CHEMISTRY – IV

Day & Date : Tuesday, 20-5-2014 **Time : 3.00 p.m. to 6.00 p.m.** **Max. Marks : 80**

Day & Date _____ Language of Answer _____
Examination _____ Paper No. _____
Subject _____ Section _____

Marks -	Out of	_____ Examination _____	For Office Use only
Signature of Examiner		_____ (Paper - _____)	Code No.

MCQ/Objective Type Questions

Duration : 30 Minutes Marks : 16

1. Multiple Choice Question. **(16×1=16)**

1) Acetyl choline is hydrolyed by an enzyme

a) E-cholinesterase ☐

b) Both a and c ☐

c) Pseudo-cholinesterase ☐

d) None of above ☐

P.T.O.

2) The drug which inhibit ACE is

a) Captopril ☐ b) Verapamil ☐

c) Atenolol ☐ d) Reserpine ☐

3) Which one of the following is MOA of lovastatin ?

a) Increase 7α-hydroxylase activity ☐

b) Increase lipoprotein lipase ☐

c) Inhibit 3-hydroxy-3-methylglutaryl-co-A reductase enzyme ☐

d) Inhibit hormone sensitive lipase ☐

4) Clofibrate is chemically

a) Ethyl-2 (-p-chlorophenoxy)-2-methyl propionate ☐

b) Ethyl-2(-m-chlorophenoxy)-2-methyl propionate ☐

c) Ethyl-2(-o-chlorophenoxy)-2-methyl propionate ☐

d) None of above ☐

5) One agent of correct class-IA antiarrythmic that is having quinoline nucleus

a) procainamide ☐ b) iosarton ☐

c) quinidine ☐ d) amylnitrate ☐

6) Atropine is racemic mixture of equal parts of

a) + and – hyosine

b) tropine and tropic acid

c) + and – hyoscyamine

d) + and – scopine

7) Mscarinic cholinoceptor agonist may induce vasodilation largely by causing the release of endothelial

a) Histamine b) Acetylcholine

c) Norephenephrine d) Nitric-oxide

8) Which one of the following is nitrovasodialator ?

a) amyl nitrate b) sodium nitrate

c) nitro glycerin d) all of above

9) The drug nifedipine can be synthesized from

a) o-nitrobenzaldehyde, methylacetoacetate and ammonia

b) p-nitrobenzaldehyde, methylacetoacetate and ammonia

c) o-nitrobenzaldehyde, ethylacetoacetate and methylamine

d) p-nitrobenzaldehyde, methylacetoacetate and methylamine

10) Nitric oxide formed by organic nitrate increase the endothelial level of

a) CAMP

b) CGMP

c) Intracellular calcium influx

d) Ionositol triphosphate

11) Adrenaline acts through

a) Alteration of intracellular CAMP

b) IP3/DAG generation

c) Direct transmembrane activation of tyrosine protein kinase

d) Nuclear receptor thereby altering DNA-RNA mediated protein synthesis

12) Which of the following is not an example of G-Protein coupled receptor ?

a) muscarinic cholinergic receptor ☐

b) nicotinic cholinergic receptor ☐

c) α -adrenoreceptor ☐

d) β -adrenoreceptor ☐

13) Digitalis glycoside c-17 position of steroidal ring is substituted by

a) α and β -unsaturated five membered lactone ring ☐

b) α and β -unsaturated six membered lactone ring ☐

c) α and β -unsaturated six membered ring ☐

d) α and β -unsaturated five membered ring ☐

14) Identify $\beta 2$ receptor agonist

a) atenolol ☐ b) reserpine ☐

c) salbutamol ☐ d) amlodipine ☐

15) Nicotinic action of acetyl choline is blocked by the drug

a) atropine ☐ b) d-tubocurarine ☐

c) neostigmine ☐ d) none of above ☐

16) The structural feature common for propranolol, atenolol in side chain is

a) isopropyl amino propan-2-ol ☐

b) dimethyl amino propan-2-ol ☐

c) diethyl amino propan-2-ol ☐

d) dibutyl amino propan-2-ol ☐

SLR-G – 41

Seat No.	

B.Pharmacy (Semester – VIII) Examination, 2014
MEDICINAL CHEMISTRY – IV

Day and Date : Tuesday, 20-5-2014 Marks : 64

Time : 3.00 p.m. to 6.00 p.m.

2. Solve **any four**. **(4×4=16)**
   1) Classify adrenergic agent give SAR of direct acting drug.
   2) Explain HMG-CO-A reductase inhibitor with examples.
   3) Explain SAR of parasympathomimetic drugs.
   4) What is carrier linkage prodrug ? How rolitetracycline formed ? Give the advantages of prodrug.
   5) Note on computer aided drug design.

3. Solve **any two**. **(8×2=16)**
   1) Explain biosynthesis of acetylcholine and explain SAR and MOA of acetylcholine.
   2) Explain chemistry, SAR, MOA of cardiac glycoside.
   3) Classify antianginal agent, discuss chemistry, MOA and uses of organic nitrate and why sublingual administration route preferred for nitrates.

4. Solve **any four**. **(4×4=16)**
   1) Explain type of prodrug with example.
   2) Explain SAR of ACE inhibitor.
   3) Explain the affecting on the biosynthesis of noradrenaline.
   4) Explain any two β-adrenergic blocker drugs.
   5) Explain MOA of irreversible cholineresterase enzyme.

5. Solve **any two**. **(8×2=16)**
   1) Write synthesis of a) Dicyclomine b) Methyldopa c) Nifedipine d) Salbutamol.
   2) Classify antihypertensive agent and explain MOA of ACE inhibitor.
   3) Write the QSAR parameter and explain in detail stearic and electronic parameter QSAR.

Code No. **SLR-G – 42**

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B.Pharm. (Semester – VIII) Examination, 2014
PHARMACEUTICAL ANALYSIS – VI

Day and Date : Thursday, 22-5-2014 Time : 3.00 p.m. to 6.00 p.m. Total Marks : 80

Day & Date ____	Language of Answer ____
Examination ____	Paper No. ____
Subject ____	Section ____

Marks -	Out of
Signature of Examiner	

____ Examination ____

____ (Paper - ____)

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Code No.

MCQ/Objective Type Questions

Marks : 16

1. Multiple choice questions : **(16×1=16)**

   1) Spin quantum number (I) for $^{1}_{1}H$ nuclei is ____

      A) 1

      B) $1/3$

      C) $1/2$

      D) $1/5$

P.T.O.

2) _____ is not a type of process validation.

A) Re-validation ☐

B) Concurrent validation ☐

C) Prospective validation ☐

D) Current validation ☐

3) Which of the following is gas phase ion source used in mass spectrometry ?

A) Electron impact ☐ B) Field desoption ☐

C) Electrospray ionization ☐ D) B) and C) ☐

4) Which of the following is a disadvantage of validation ?

A) Reduction of quality cost ☐

B) Process optimisation ☐

C) Assurance of quality ☐

D) None of these ☐

5) Which of the following packaging material, bursting strength test is done ?

A) Aluminium foil ☐ B) Glass ☐

C) Plastic bottle ☐ D) None of these ☐

6) NMR is concerned with _____ properties of certain nuclei.

A) Electrostatic ☐ B) Magnetic ☐

C) Non-magnetic ☐ D) All of these ☐

7) Which of the following are not the components of the mass spectrometer ?

A) Magnets ☐ B) Radiofrequency wave ☐

C) Ion source ☐ D) A) and B) ☐

8) Field sweep NMR instrument where _____

A) Magnetic field and radiofrequency is kept constant ☐

B) Magnetic field is kept steady and radiofrequency is continuously changed ☐

C) Continuously and radiofrequency is kept constant ☐

D) None of these ☐

9) Which of the following is a component of quality management system ?

A) Quality assurance ☐ B) cGMP ☐

C) Quality control ☐ D) All of these ☐

10) The arithmetic mean for the given values is _____

values : 10, 15, 25, 30 and 50.

A) 22 ☐ B) 24 ☐

C) 26 ☐ D) 28 ☐

11) Energetic atomic beam used in FAB ion source is _____

A) Xenon atom ☐ B) Argon atom ☐

C) Helium atom ☐ D) A) and B) ☐

12) Validation does not involves determination of _____

A) Accuracy ☐ B) Linearity ☐

C) Range ☐ D) None ☐

13) The t-test can be done for _____ sample(s).

A) One ☐

B) Two independent ☐

C) Two dependent ☐

D) All of above ☐

14) Number of signals for the molecule $CH_3 – O – CH_2 – CH_3$ is _____

A) Three

B) Two

C) Four

D) Five

15) Which of the followings are quality control test carried out for rubber closure as per IP ?

A) Acidity or alkalinity

B) Reducing substances

C) Light absorption

D) All of these

16) Chemical shift range value for alkyne proton is _____

A) 4-8

B) 6-9

C) 9.5-10

D) None of these

SLR-G – 42

Seat No.	

B.Pharm. (Semester – VIII) Examination, 2014

PHARMACEUTICAL ANALYSIS – VI

Day and Date : Thursday, 22-5-2014 Marks :64
Time : 3.00 p.m. to 6.00 p.m.

2. Answer **any four** of the following questions : **(4×4=16)**
   1) Draw a neat labeled diagram of NMR instrument.
   2) Explain principle of mass spectrometry.
   3) Write on bursting strength and folding endurance test for packaging material.
   4) Write on equipment validation.
   5) Write on any two quality control test for glass container.

3. Answer **any four** of the following questions : **(4×4=16)**
   1) Write on McLafferty rearrangement.
   2) Define : Mean, Mode, Median and Range.
   3) Write on quality control test for rubber closure.
   4) What is coupling constant ? Give examples.
   5) Write on applications of mass spectrometry.

4. Answer **any two** of the following questions : **(2×8=16)**
   1) Explain with suitable diagram magnetic field mass analyzers used in mass spectrometry.
   2) Explain role of QA in pharmaceutical industry. Distinguish between QA and QC.
   3) Enlist factors affecting chemical shift. Explain anisotropic effect on chemical shift.

5. Answer **any two** of the following questions : **(2×8=16)**
   1) Explain any two gas phase ion sources used in mass spectrometry.
   2) Explain with suitable examples spin-spin coupling.
   3) Give detailed ICH guidelines for UV method validation.

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B. Pharmacy (Semester – VIII) Examination, 2014
PHARMACOLOGY – IV

Day and Date : Saturday, 24-5-2014 Time : 3.00 p.m. to 6.00 p.m. Total Marks : 80

Day & Date ________	Language of Answer ________
Examination ________	Paper No. ________
Subject ________	Section ________

Marks -	Out of
Signature of Examiner	

________ Examination ________

________ (Paper - ________)

For Office Use only
Code No.

MCQ/Objective Question Paper

Marks : 16

I. Choose most appropriate answer for multiple choice questions given below : **(1×16=16)**

1) Which of the following is a Beta Lactamase inhibitor obtained from microbiological source ?

a) Sulbactam ☐ b) Tazobactam ☐

c) Clavulanic Acid ☐ d) None of these ☐

P.T.O.

2) The end point of Insulin Bioassay is _____

a) Hypoglycemic Convulsions

b) Elevation of Blood Pressure

c) Aortic Contractions

d) Cardiac Arrest

3) All of the following antifungal drugs are used topically except _____

a) Ketoconazole

b) Fluconazole

c) Miconazole

d) Clotrimazole

4) _____ of the following is used in the treatment of acne.

a) Tretinoin

b) Rifampin

c) Aspirin

d) All of these

5) Which of the following drug is used in the treatment of Scabies is also called Lindane ?

a) Monosulphiram

b) Crotamiton

c) Permethrin

d) Gamma Benzene Hexachloride

6) The first Quinolone introduced in the market was _____

a) Ciprofloxacin ☐ b) Nalidixic Acid ☐

c) Norfloxacin ☐ d) Ofloxacin ☐

7) _____ of the following NSAID's is used as eye drops in treatment of conjunctivitis and other ocular inflammatory diseases.

a) Aspirin ☐ b) Flurbiprofen ☐

c) Mefenamic Acid ☐ d) All of these ☐

8) _____ is an example of third generation oral Cephalosporin.

a) Cefradine ☐ b) Ceftriaxone ☐

c) Cefixime ☐ d) Cephalexin ☐

9) _____ among the following fluoroquinolones has highest oral bioavailability.

a) Ciprofloxacin ☐ b) Norfloxacin ☐

c) Levofloxacin ☐ d) Ofloxacin ☐

10) 1 gram of Crystalline Sodium Benzyl Penicillin = _____ Million Units.

a) 1.6 ☐ b) 2.6 ☐

c) 3.6 ☐ d) 4.6 ☐

11) _____ is an example of carbapenem.

a) Oxopenem ☐ b) Meropenem ☐

c) Aztreonam ☐ d) Tazobactam ☐

12) Specific toxicity of Tetracyclines is _____, hence they are not used during pregnancy.

a) Nephrotoxicity ☐

b) Cardiotoxicity ☐

c) Neurotoxicity ☐

d) Teeth and Bone Toxicity ☐

13) Gentamicin is used _____

a) Only topically ☐

b) Only orally ☐

c) Only intravenously ☐

d) Both topically and intravenously ☐

14) _____ of the following macrolides is least acid stable and has narrowest antimicrobial spectrum.

a) Erythromycin ☐ b) Roxithromycin ☐

c) Azithromycin ☐ d) Clarithromycin ☐

15) _____ among the following is a second line anti-tubercular drug.

a) Rifampin ☐

b) Isoniazid ☐

c) Ethambutol ☐

d) Para amino salicylic acid ☐

16) Dose dependent toxic effect of Isoniazid is _____

a) Fever ☐ b) Tachycardia ☐

c) Alopecia ☐ d) Peripheral Neuritis ☐

_____

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Seat No.	

B. Pharmacy (Semester – VIII) Examination, 2014
PHARMACOLOGY – IV

Day and Date : Saturday, 24-5-2014 Marks : 64
Time : 3.00 p.m. to 6.00 p.m.

II. Answer **any four** : **(4×4=16)**

1) Write mechanism of action and uses of sulfonamides.
2) Briefly write principles of anti-microbial therapy.
3) Write a brief note on drug therapy of Scabies and Pediculosis.
4) Classify Anthelmintic Drugs with examples.
5) Describe bioassay of Acetylcholine.

III. Answer **any four** : **(4×4=16)**

1) Describe common toxicities of Aminoglycoside antibiotics.
2) Classify Cephalosporins with examples.
3) Briefly write about drug therapy of Alopecia.
4) Write mechanism of action of Tetracyclins and Chloramphenicol.
5) Write a note on adverse effects and uses of Ciprofloxacin.

IV. Answer **any two** : **(8×2=16)**

1) Define antineoplastic drugs. Enumerate different classes of anti-neoplastic drugs with examples. Add a note on Alkylating Agents as antineoplastic drugs.
2) Classify anti-malarial drugs with examples. Add a note on Pharmacology of Chloroquine.
3) What is Psoriasis ? Enumerate various drugs used in the treatment of Psoriasis. Add a note on Topical Therapy of Psoriasis.

V. Answer **any two** : **(8×2=16)**

1) What are Bioassays ? Describe Principles, Types and Applications of Bioassays. Add a note on Bioassay of Insulin.
2) Classify anti-tubercular drugs with examples. Why anti-tubercular drugs are classified as first line and second line ? Add a note on Mechanism of action and adverse effects of Isoniazid.
3) Classify anti-retroviral drugs with examples. Write about various combination regiments used in the treatment of AIDS.

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B.Pharmacy (Semester – VIII) Examination, 2014
HERBAL TECHNOLOGY

Day and Date : Tuesday, 27-5-2014 **Time : 3.00 p.m. to 6.00 p.m.** **Total Marks : 80**

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

____________ Examination ____________

____________ (Paper - ________)

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MCQ/Objective Type Question Paper

Marks : 16

1. Multiple Choice Questions (MCQ)/Objective Type Questions. **(1×16=16)**

1) Henna, Chamomile, Indigo etc. acts as

a) dye the grey hair to get natural black color

b) Antiseptic

c) Preservative

d) None

P.T.O.

2) Inconsistency of finished formulations is one of the demerit of

a) Monoherbal preparation ☐

b) Polyherbal preparation ☐

c) Both Mono and Polyherbal preparation ☐

d) None ☐

3) Cosmetic preparations applied on the skin and left for several hours say overnight and assist in the repair of skin which has been damaged by exposure to various elements or exposure to detergent solution or soap are called.

a) Cleansing creams ☐ b) Vanishing creams ☐

c) Night and Massage creams ☐ d) Foundation creams ☐

4) No drug-drug interaction, ease of standardization and less chances of Adulteration are the merits of

a) Monoherbal preparation ☐

b) Polyherbal preparation ☐

c) Both Mono and Polyherbal preparation ☐

d) None ☐

5) Asavas and Arishtas has advantages like

a) Detoxify certain phytochemicals ☐

b) Exhibit rapid therapeutic effects at low doses ☐

c) Degrade certain phytochemicals ☐

d) Both a) and b) ☐

6) In the quality control for hair dyes, color uniformity, compatibility of color with hair, washability of color and color stability are the evaluation parameters to determine the

a) Performance ☐ b) Toxicity ☐

c) Physico-chemical property ☐ d) None ☐

7) The powdered from of the substances, obtained by calcination of metals minerals or animal products

a) Vati ☐ b) Bhasma ☐

c) Pishti ☐ d) Taila ☐

8) In order to keep crude drugs as long as possible

a) It is necessary to protect the drug against insect attack ☐

b) It is essential to store them in a dry condition in carefully closed containers ☐

c) It is advisable to exclude light ☐

d) All the above ☐

9) Infusions are normally prepared for

a) Immediate use ☐ b) Prolonged use ☐

c) Both a) and b) ☐ d) None ☐

10) Disintegration time and weight variation are the quality control tests for

a) Vati ☐ b) Bhasma ☐

c) Pishti ☐ d) Taila ☐

11) Washing, cutting, sorting, peeling, squeezing, brushing, drying and grading or any other such activity performed in making the medicinal plant produce usable is called

a) Primary processing ☐ b) Post-harvest processing ☐

c) Secondary processing ☐ d) None ☐

12) Determination of Particle size (80-100 mesh) or 40-60 mesh is a parameter in quality control of

a) Vati ☐ b) Bhasma ☐

c) Churna ☐ d) Taila ☐

13) Recommended packaging options for drugs that are woody in nature-Root, stem, wood, woody bark etc is

a) Gunny bags ☐ b) Jute bags ☐

c) Woven sacks ☐ d) All of above ☐

14) Instrumental analyses employed for heavy metals determination is by

a) Atomic Absorption Spectrophotometry (AAS) ☐

b) Inductively Coupled Plasma (ICP) ☐

c) Neutron Activation Analysis (NAA) ☐

d) All the above ☐

15) The status of a drug that is determined by identity, purity, content and other chemical, physical or biological properties is defined as

a) Quality ☐ b) Safety ☐

c) Efficacy ☐ d) None ☐

16) Herbal medicines that are modified in some way-either shape, or form including dose, dosage form, mode of administration are called

a) Indigenous herbal medicines ☐

b) Herbal medicines in systems ☐

c) Modified herbal medicines ☐

d) Imported products with a herbal medicine base ☐

SLR-G – 44

Seat No.	

B.Pharmacy (Semester – VIII) Examination, 2014

HERBAL TECHNOLOGY

Day and Date : Tuesday, 27-5-2014 Marks : 64

Time : 3.00 p.m. to 6.00 p.m.

2. Answer **any four.** **(4×4=16)**

   1) Enlist the parameters for the valuation of Avaleha.
   2) Define Herbal cosmetics and classify with examples.
   3) Write short note on safety considerations of herbal medicine.
   4) Write 4 merits and demerits of Monoherbal Formulations.
   5) Write a short note on importance of Herbal Medicine.

3. Answer **any four** : **(4×4=16)**

   1) Describe the classification of herbal drugs under 4 categories.
   2) Define phytopharmaceuticals and give any 6 examples including their source and indications.
   3) Define quality and list the physical methods for the quality assessment of Herbal drugs.
   4) Name the herbal drugs used in skin and hair care products with their property or use.
   5) Define the following with examples :
      a) Avaleha
      b) Churna
      c) Vati
      d) Bhasma.

4. Answer **any two** : **(8×2=16)**

   1) Define poly herbal formulation and describe their merits and demerits.

   2) Describe the different methods recommended by WHO in the quality control of Herbal drugs.

   3) Write note on :

      a) Herbal Drug regulations in India

      b) Evaluation of Taila.

5. Answer **any two** : **(8×2=16)**

   1) How do you prepare and standardize Ayurvedic Fermented Formulations and give examples.

   2) What are hair dyes, list their ideal characteristics and how do you standardize hair dyes ?

   3) Write note on :

      a) Preparation and evaluation of Bhasma

      b) Import and export of herbal drugs.

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B.Pharm. (Semester – IV) Examination, 2014
ENVIRONMENTAL STUDIES

Day and Date : Sunday, 25-5-2014 Time : 10.00 a.m. to 12.00 noon Max. Marks : 50

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

__________ Examination __________

______________ (Paper - ______)

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Instructions : *1)* ***All*** *questions are* ***compulsory.***
2) Figures to the ***right*** *indicate* ***full*** *marks.*

MCQ/Objective Type Questions

Marks : 10

1. Choose the correct answer : **10**

I) Earth day is celebrated on ____________

A) 22^{nd} April ☐ B) 22^{nd} May ☐

C) 22^{nd} June ☐ D) 22^{nd} July ☐

P.T.O.

II) The environment word come from _____ language.

A) Roman ☐ B) French ☐

C) Greek ☐ D) Latin ☐

III) The greatest source of energy on the earth is _____

A) Wind ☐ B) Water ☐

C) Sun ☐ D) Coal ☐

IV) _____ is renewable natural resources.

A) Coal ☐ B) Iron-ore ☐

C) Natural oil ☐ D) Water ☐

V) _____ percent of earth geographical area is under water.

A) 71% ☐ B) 81% ☐

C) 61% ☐ D) 51% ☐

VI) The main source of air pollution in India is _____

A) Automobiles ☐ B) Industrialization ☐

C) Forest fire ☐ D) Nuclear explosion ☐

VII) "Save Silent Valley" Movement occurred in _____

A) Goa ☐ B) Kerala ☐

C) Gujarat ☐ D) Tamilnadu ☐

VIII) Mention the year of Earth Summit.

A) 1952 ☐ B) 1962 ☐

C) 1972 ☐ D) 1982 ☐

IX) The Air Prevention and Control Act was passed by central government in the year _____

A) 1974 ☐ B) 1981 ☐

C) 1972 ☐ D) 1982 ☐

X) Acid rain is a result of _____ pollution.

A) Land ☐ B) Noise ☐

C) Air ☐ D) Water ☐

_____

SLR-G – 45

Seat No.	

B.Pharm. (Semester – IV) Examination, 2014
ENVIRONMENTAL STUDIES

Day and Date : Sunday, 25-5-2014 Marks : 40
Time : 10.00 a.m. to 12.00 noon

Instructions *: 1)* ***All*** *questions are* ***compulsory****.*
2) Figures to the ***right*** *indicate* ***full*** *marks.*

2. Write short answer of the following (**any four** out of six) : **8**
   a) Importance of environmental studies
   b) Causes of deforestation
   c) Causes of land pollution
   d) World food problem
   e) Forest ecosystem
   f) Food chains.

3. Write short notes of the following (**any four** out of six) : **12**
   a) Need of environmental awareness.
   b) Causes of AIDS.
   c) What is sustainable development ?
   d) Nuclear hazards.
   e) Remedies of air pollution.
   f) Narmada Movement.

4. a) What is pollution ? Discuss the causes and effects of water pollution in India. **10**

   OR

   b) Elaborate various measures to protect the environment.

5. Explain the effect of Global Warming and suggest control measures of it. **10**

Code No. **SLR-G – 5**

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B.Pharmacy (Semester – I) Examination, 2014
PHARMACOGNOSY – I

Day and Date : Friday, 23-5-2014 Time : 10.00 a.m. to 1.00 p.m. Total Marks : 80

Day & Date ______	Language of Answer ______
Examination ______	Paper No. ______
Subject ______	Section ______

Marks -	Out of
Signature of Examiner	

______ Examination ______

______ (Paper - ______)

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Code No.

MCQ/Objective Question Paper

Marks : 16

1. Select most appropriate answer from the following : **(1×16)**

   1) Select the drug, which is not belonging to glycoside class ?

      A) Digitalis B) Senna

      C) Nuxvomica D) Cascara

P.T.O.

2) Leaves of the following drugs are effective, except

A) Senna ☐ B) Digitalis ☐

C) Clove ☐ D) Vasaka ☐

3) Following microscopical evaluation used for the authentication of leaf, except

A) Stomatal number ☐

B) Stomatal index ☐

C) Palisade ratio ☐

D) Swelling index ☐

4) Drug is not an example of organized crude drug

A) Aloe ☐ B) Digitalis ☐

C) Clove ☐ D) Cinchona ☐

5) In Ginger secretary cells are present in

A) Xylem ☐

B) Phloem ☐

C) Both A) and B) ☐

D) None of the above ☐

6) Who is known as father of medicine ?

A) Aristotle ☐ B) Dioscorides ☐

C) Hippocrates ☐ D) Galen ☐

7) Who has first isolated morphine from opium poppy ?

A) Serturner
B) Willium withering
C) Paullitzsky
D) Peltier

8) According to which system of medicine, Health is defined as the balanced state of tridoshas

A) Unani
B) Chinese
C) Homeopathic
D) Ayurveda

9) The classification of crude drugs based on the active ingredients of crude drugs is called as

A) Morphological classification
B) Biological classification
C) Taxonomical classification
D) Chemical classification

10) Which subterranean organ of the plant transport water, mineral and salts from the soil to the other parts of the plant

A) Rhizomes
B) Bulbs
C) Roots
D) Stolen

11) The tissue which are formed outside the vascular cambium or the xylem in higher plants as a result of secondary growth is termed as

A) Rhizomes
B) Wood
C) Stem
D) Barks

12) Wavy epidermis is the characteristic of the leaf

A) Senna
B) Digitalis
C) Hyoscyamus
D) Vinca

13) Small moulded and dried masses of flour dough are adulterated with Ergot sclerotia are an example of

A) Substitution of exhausted drugs ☐

B) Substitution of artificially manufactured material ☐

C) Substitution of inferior drugs ☐

D) None of the above ☐

14) Pedology is a branch of science which deals with the study of

A) Soil ☐ B) Altitude ☐

C) Plant ☐ D) None of the above ☐

15) A fruit which is formed from one carpel and splits along both dorsal and ventral sutures is called as

A) Capsule ☐ B) Follicle ☐

C) Legume ☐ D) None of the above ☐

16) Which one among the following system of medicine is based on the Hippocratic theory of four humours and the Pythagorian theory of four proximate qualities ?

A) Siddha system of medicine ☐

B) Unani system of medicine ☐

C) Homeopathic system of medicine ☐

D) Chinese system of medicine ☐

SLR-G – 5

Seat No.	

B.Pharmacy (Semester – I) Examination, 2014
PHARMACOGNOSY – I

Day and Date : Friday, 23-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – I

2. Answer **any four** : **(4×4=16)**

1) Write a note on Pharmaceutical aid

2) Explain :

A) Mutation

B) Hybridization.

3) Define Pharmacognosy and explain its scope.

4) Explain significance of ash values of crude drug.

5) Define :

A) Seed

B) Root

C) Fruit

D) Rhizomes.

6) Explain in brief Parenchyma and Collenchyma.

3. Answer **any two** : **(8×2=16)**

1) Enlist the various system of medicine and explain in detail Unani system of medicine.

2) Write a note on gross morphology of Bark with example.

3) Explain Chinese system of medicine in detail.

SECTION – II

4. Answer **any four** : **(4×4=16)**

   1) Define crude drugs and write a note on chemical classification of crude drugs with examples.

   2) Explain Vascular tissue system.

   3) Classify the crude drug according to biological activity.

   4) Write a note on drying of Drugs of Natural Origin.

   5) Define evaluation and explain morphological evaluation with examples.

   6) What is drug adulteration and explain different methods for adulteration.

5. Answer **any two** : **(8×2=16)**

   1) Enlist the various leaf constants and explain any four leaf constant.

   2) Write a note on factor affecting cultivation of medicinal plants including exogenous factor.

   3) Write a note on collection and processing of crude drugs.

Code No. **SLR-G – 6**

Seat No.	

Signature of Jr. Supervisor

Seat No. ____________ Centre ____________	For Office Use Only
Seat No. in words ____________	Code No.

B.Pharm. (Semester – II) Examination, 2014
PHARMACEUTICS – II

Day and Date : Tuesday, 13-5-2014 **Time : 10.00 a.m. to 1.00 p.m.** **Total Marks : 80**

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

____________ Examination ____________

____________ (Paper - ________)

For Office Use only
Code No.

MCQ/Objective Type Questions

Marks : 16

1. MCQs : **16**

   1) Material is hit on object this process is called as ____________
      a) Compression
      b) Impact
      c) Attrition
      d) None of the above

P.T.O.

2) Which is ultra fine reduction Mill ?

a) Ball Mill ☐ b) Hammer Mill ☐

c) Colloid Mill ☐ d) None of the above ☐

3) Type-I glass is prepared from

a) Borosilicate ☐ b) Soda lime ☐

c) Pyrex ☐ d) None of the above ☐

4) Wet grinding is also called as

a) Levigation ☐ b) Filtration ☐

c) Compression ☐ d) None ☐

5) Membrane filter paper is made up from

a) Cellulose ester ☐ b) Pyrex ☐

c) Cotton ☐ d) None ☐

6) Which one is press filter ?

a) Filter leaf ☐ b) Drum filter ☐

c) Plate and frame filter ☐ d) None ☐

7) Hammer Mill is based on which principle ?

a) Impact ☐ b) Cutting ☐

c) Crushing ☐ d) None ☐

8) Capsicum cotton wool is used as

a) Rubbificiants ☐ b) Soothing ☐

c) Non-irritant ☐ d) None of the above ☐

9) Which factors affected on rate of filtration ?

a) Area of filter surface ☐ b) Particle size ☐

c) Temperature ☐ d) All of the above ☐

10) Which method is used for determination of particle size ?

a) Sieving ☐ b) Sedimentation ☐

c) Optical microscopy ☐ d) All of the above ☐

11) What is the category for after shave lotion ?

a) Purgative ☐ b) Astringent ☐

c) Antiseptic ☐ d) Both a) and b) ☐

12) Positive mixing is also called as

a) Miscible mixing ☐ b) Immiscible mixing ☐

c) Both a) and b) ☐ d) None of the above ☐

13) What is the category for effervescent sodium sulphate granule ?

a) Demulcent ☐ b) Saline Purgative ☐

c) Astringent ☐ d) None of the above ☐

14) Which equipment is used for powder mixing ?

a) Tumbler ☐ b) Double cone blender ☐

c) Agitator ☐ d) All the above ☐

15) Lotions are applied

a) With friction ☐ b) Without friction ☐

c) On un broken skin ☐ d) Both b) and c) ☐

16) What is the category for salicylic acid Lotion ?

a) Keratolytic ☐ b) Astringent ☐

c) Both a) and b) ☐ d) None ☐

SLR-G – 6

Seat No.	

B.Pharm. (Semester – II) Examination, 2014
PHARMACEUTICS – II

Day and Date : Tuesday, 13-5-2014 Marks : 64
Time :10.00 a.m. to 1.00 p.m.

SECTION – I

2. **Note** : Answer **any four** : **(4×4=16)**

   1) Explain Blister packaging and Tamper resistant packaging.

   2) Explain the application of pharmaceutical additives.

   3) Explain sensitivity and irritation test for cosmetics preparation.

   4) Draw neat labeled diagram of fluid energy Mill and Hammer Mill.

   5) Explain Pharmaceutical application of size reduction.

   6) Write a note on Mechanism of liquid mixing.

3. Answer the following : **(8×2=16)**

   1) Draw neat labeled diagram of Ball Mill. Write its construction working advantage and disadvantage.

   2) Define Powder. Write advantages and disadvantages of powders and write principle and procedure for Oral rehydration salt.

   OR

   2) Explain in details about Pharmaceutical Additives.

SECTION – II

4. **Note** : Answer **any four** : **(4×4=16)**

   1) Write working constriction of Cyclone separator.

   2) Write its constriction and working of Hammer Mill.

3) Draw neat labeled diagram of Cutter Mill and Roller Mill.

4) Explain mechanism of size reduction.

5) Explain sensitivity and irritation test for cosmetics preparation.

6) Write a procedure and principle for after shave lotion.

5. Answer the following : **(8×2=16)**

1) Define Pharmaceutical packaging and write in brief about materials used in pharmaceutical packaging.

2) Write principle and procedure for talcum powder and Hair care lotion.

OR

2) Define Surgical dressing, write its ideal properties and write its different types of surgical dressing.

Code No. **SLR-G – 7**

Seat No.	

Signature of Jr. Supervisor

Seat No. ________ Centre ________	For Office Use Only
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B.Pharmacy (Semester – II) Examination, 2014
MODERN DISPENSING AND HOSPITAL PHARMACY

Day and Date : Saturday, 17-5-2014 Time : 10.00 a.m. to 1.00 p.m. Total Marks : 80

Day & Date ________	Language of Answer ________
Examination ________	Paper No. ________
Subject ________	Section ________

Marks -	Out of
Signature of Examiner	

________ Examination ________

________ (Paper - ________)

For Office Use only
Code No.

MCQ/Objective Type Questions

Marks : 16

1. Multiple choice questions : **(1×16=16)**

   1) In prescription R is abbreviation for Latin word

      a) Recipe ☐

      b) You take ☐

      c) Take care ☐

      d) All of above ☐

P.T.O.

2) In herapath reaction after 3 days we will get green crystals of

a) Quinine sulphate ☐ b) Quinine bisulphate ☐

c) Quinine lodide ☐ d) Potassium lodide ☐

3) In posology average body surface area for adult is _____ m^2.

a) 1.7 ☐ b) 1.73 ☐

c) 1.8 ☐ d) 1.79 ☐

4) Convert the following Latin term in to English – Pulvis.

a) A snuff ☐ b) A puff ☐

c) A tuff ☐ d) A powder ☐

5) Which following factor affects Posology ?

a) Route of administration ☐ b) Route of elimination ☐

c) Idiosyncrasy ☐ d) All of above ☐

6) English meaning of Da is

a) To take ☐ b) To give ☐

c) Take and give ☐ d) None of above ☐

7) Normal concentration of CO_2 in air is _____ %.

a) 0.03 ☐ b) 0.035 ☐

c) 0.04 ☐ d) 0.05 ☐

8) Which advice you will give to patient when your are dispensing Insulin Injection to him ?

a) Do not freeze the injection ☐

b) Keep the solution always at 2 to 8°C ☐

c) Always keep away from children ☐

d) All of above ☐

9) Non charged floor stock drugs means

a) Charges for particular drug are not taken from patient ☐

b) Charges for particular drug are not included in patient bill ☐

c) Charges for particular drug are included in patient per day room rent ☐

d) Charges for particular drug are taken from patient relative ☐

10) PTC is line of communication between doctor and other medical staff, so PTC means

a) Pharmacy and therapeutic co-coordinators ☐

b) Pharmacy and therapeutic committee ☐

c) Pharmacy in hospital and therapeutic committee ☐

d) Pharmacy and therapeutically comittee ☐

11) 90% v/v ethyl alcohol solution means

a) 90 ml into 99.25 ml water ☐

b) 90 gm into 100 gm water ☐

c) 90 ml into 100 ml of water ☐

d) 90 ml into 100 gm water ☐

12) Number of pharmacists required for 50 bed hospital is _____

a) 5 ☐ b) 6 ☐

c) 8 ☐ d) None of above ☐

13) Proof strength of alcohol is expressed by taking _____ % alcohol as 100% proof.

a) 50 ☐ b) 60 ☐

c) 70 ☐ d) 80 ☐

14) Atomic number is denoted by English letter.

a) a ☐ b) n ☐

c) z ☐ d) I ☐

15) N_2O is stored in _____ colour container.

a) Green ☐ b) Blue ☐

c) Black ☐ d) White ☐

16) Displacement value means

a) No of mg of substance that displaces 1 mg of suppository base ☐

b) No of gm of substance that displaces 1 gm of suppository base ☐

c) No of kg of substance that displaces 1 kg of suppository base ☐

d) All of above ☐

_____

SLR-G – 7

Seat No.	

B.Pharmacy (Semester – II) Examination, 2014
MODERN DISPENSING AND HOSPITAL PHARMACY

Day and Date : Saturday, 17-5-2014 Marks :64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – I

2. Solve **any four** : **(4×4=16)**

1) Write a short note on pricing of prescription. Which common instructions pharmacist should give to the patient while dispensing medicament.

2) If pharmacist wants to prepare 500 ml of 0.9% w/v solution of NaCl, how he will prepare ? Add a note on what happens when we inject hyper and hypotonic solution of NaCl ?

3) How many milliliters of 2% and 7% v/v solution of alcohol to be mixed to get 1 gallon of 3.5% v/v solution ?

4) Convert the following Latin term in to English :
   a) Hodie
   b) Mane
   c) Ante cibos
   d) Dolere urgent.

5) How you will prepare 89 ml of 0.35% Chloramphenicol solution iso-osmotic with eye. Given : Freezing Point Depression of 2% Chloramphenicol solution – 0.43°C.

6) Define posology. Write any three formulas for calculating doses for children with scientist name.

3. Solve the following : **(8×2=16)**

1) How you will dispense following prescription, as well as mention the type of Incompatibility present in following prescription :
   a) R_x
   Menthol
   Camphor
   Prepare and Submit Powder.

b) R_x
Quinine bisulphate
Dilute sulphuric acid
Potassium Iodide
Water up to 100 ml.
Prepare and submit mixture.

c) R_x
Codeine Phosphate 0.5 gm
Prepare 10 powder sachets and dispense.

2) What do you mean by %w/w, %w/v and %v/v solutions ? Which important instruction pharmacist should give to patient while dispensing Injectables, eye drops and insulin injection.

OR

2) Calculate the displacement value for bismuth subgallate.

Given : Weight of 6 suppositories containing coca butter – 6 gm.

Weight of 6 suppositories containing 37% of bismuth subgallate – 7.35 gm.

SECTION – II

4. Solve **any four** : **(4×4=16)**

1) Define the term hospital pharmacy. Give its function.

2) Write the general procedure for purchasing of drug for hospital. Write a formula for E.O.Q.

3) In what proportion pharmacist should mix 20%, 5%, 15% and 3% zinc oxide ointment to get 10% ?

4) Write a short note on hospital formulary.

5) Write eligibility, duties and responsibilities of hospital pharmacist.

6) Write a detail note on drug distribution system for inpatient department.

5. Solve the following : **(8×2=16)**

1) Define Medicinal Gases. Give the therapeutic uses of Oxygen and Carbon dioxide. Mention the colour of container for both the gases.

2) What type of nucleus is having radioactive property ? Add detail note on hazardous effect of radiation on human being and mention the preventive technique for same.

OR

2) Define PTC. Give construction and functions of PTC.

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Code No. **SLR-G – 8**

Seat No.	

Signature of Jr. Supervisor

Seat No. ____ Centre ____ Seat No. in words ____	For Office Use Only Code No.

B.Pharm. (Semester – II) Examination, 2014
ORGANIC CHEMISTRY – I

Day and Date : Tuesday, 20-5-2014 Time : 10.00 a.m. to 1.00 p.m. Total Marks : 80

Day & Date ____	Language of Answer ____
Examination ____	Paper No. ____
Subject ____	Section ____

Marks -	Out of	____ Examination ____	For Office Use only
Signature of Examiner		____ (Paper - ____)	Code No.

MCQ/ Objective Type Questions

Marks : 16

1. Multiple choice questions : **(16×1=16)**

   1) Which of the following compound will not be easily oxidized ?
      A) Primary alcohol
      B) Secondary alcohol
      C) Tertiary alcohol
      D) Aldehyde

P.T.O.

2) The reaction of a sodium alkoxide with an alkyl halide is called

A) Wurtz fitting ☐ B) Williamsons synthesis ☐

C) Perkin reaction ☐ D) Aldol condensation ☐

3) Two molecules of HCl adds to propyne gives

A) 2,2-dichloropropane ☐ B) 1,3-dichloropropane ☐

C) 1,2-dichloropropane ☐ D) None of these ☐

4) Pyrolysis of alkanes is carried out at _____°C.

A) 0-200 ☐ B) 200-400 ☐

C) 500-700 ☐ D) 900-1000 ☐

5) If the double bonds are separated by one single bond then the diene is called

A) Isolated ☐ B) Conjugated ☐

C) Nonconjugated ☐ D) Cumulated ☐

6) _____ is temporary effect.

A) Inductive effect ☐ B) Mesomeric effect ☐

C) Electromeric effect ☐ D) Hyperconjugation ☐

7) Alkynes reacts with hydrogen in the presence of_____ to give alkenes.

A) Lindlars catalyst ☐ B) Grignards reagent ☐

C) Zn ☐ D) Ni ☐

8) Oxygen is less electronegative than

A) Fluorine ☐ B) Bromine ☐

C) Iodine ☐ D) Chlorine ☐

9) When acetylene is passed through hot iron tube at 400°C it gives

A) Benzene ☐ B) Toluene ☐

C) o-Xylene ☐ D) Mesitylene ☐

10) Propadiene $CH_2=C=CH_2$ is

A) A planar compound ☐ B) Conjugated compound ☐

C) An isolated diene ☐ D) Cumulated diene ☐

11) Isobutyl group is which type of an _____ alkyl group.

A) Primary ☐ B) Secondary ☐

C) Tertiary ☐ D) None of these ☐

12) Which of the following molecular formula will correspond to an alkene with two double bond ?

A) C_4H_{10} ☐ B) C_5H_{12} ☐

C) C_6H_{10} ☐ D) C_8H_{16} ☐

13) Lindlars catalyst is

A) $LiAlH_4$ ☐ B) $Pd/BaSO_4$ in quinoline ☐

C) NH_2NH_2 ☐ D) $HCl/ZnCl_2$ ☐

14) Methane is produced by the hydrolysis of

A) CaC_2 ☐ B) Al_4C_3 ☐

C) Dry ice ☐ D) 2-butane ☐

15) Alkyl halide undergoes

A) Substitution ☐ B) Elimination ☐

C) Addition ☐ D) All of above ☐

16) 2-bromo butane reacts with alcoholic KOH to give

A) 1-butene ☐ B) 2-butene ☐

C) 1-butenol ☐ D) 2-butane ☐

SLR-G – 8

Seat No.	

B.Pharm. (Semester – II) Examination, 2014
ORGANIC CHEMISTRY – I

Day and Date : Tuesday, 20-5-2014 Marks : 64

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

SECTION – I

2. Answer **any four** of the following questions : **(4×4=16)**
   1) What is E1 reaction and give its mechanism ?
   2) Give four methods of preparation of alkynes.
   3) Write a note on different classes of reagent.
   4) Explain in detail steric effect.
   5) Write a note on polarity of molecule.
   6) Write down structure from given chemical names :
      1) 1,3-pentyne
      2) 5-methyl-3-ethyl heptane
      3) Hex-2-en-6-ol
      4) 3,3-dimethyl-1-propyne.

3. Answer the following questions : **(2×8=16)**
   1) Explain how primary, secondary and tertiary alcohols differ in their behavior in the following reactions :
      1) Oxidation
      2) Lucas test
      3) Victor Meyer test.
   2) Write structure, generation, stability and reactions of carbanion.

      OR

   2) Discuss the mechanism and factors affecting SN2 reaction with example.

SECTION – II

4. Answer **any four** of the following questions : **(4×4=16)**

   1) Write a note intermolecular force.

   2) Explain in detail resonance effect.

   3) Write chemical reactions of alkenes.

   4) What happens when ether undergoes halogenation and auto-oxidation ?

   5) What is esterification reaction ?

   6) Explain Diels alder reaction.

5. Answer the following questions : **(2×8=16)**

   1) What are E1 and E2 reactions ? Explain their mechanism. Write a note on Markonikovs and Anti-Markonikovs rule.

   2) What are factors affecting acid base strength ?

   OR

   2) Discuss in detail of inductive and resonance effect.

Code No. **SLR-G – 9**

Seat No.	

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Seat No. ____________ Centre ____________	For Office Use Only
Seat No. in words ______________________	Code No.

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B.Pharm. (Semester – II) Examination, 2014
BIOCHEMISTRY – II

Day and Date : Thursday, 22-5-2014 **Time : 10.00 a.m. to 1.00 p.m.** **Total Marks : 80**

Day & Date ____________	Language of Answer ____________
Examination ____________	Paper No. ____________
Subject ____________	Section ____________

Marks -	Out of
Signature of Examiner	

____________ Examination ____________

____________ (Paper - ________)

For Office Use only
Code No.

MCQ/Objective Type Question Paper

Marks : 16

1. Multiple choice questions : **16**

1) At isoelectric PH, amino acids exist as

a) Cations ☐ b) Anions ☐

c) Zwitterions ☐ d) Acidic ions ☐

P.T.O.

2) The primary structure of protein involves the determination of _____
   a) Bonds responsible for protein structure ☐
   b) Amino acid composition and their sequence ☐
   c) Spatial arrangement of polypeptide ☐
   d) None of the above ☐

3) Enzymes are _____
   a) Catalysts ☐ b) Reactants ☐
   c) Biocatalysts ☐ d) Substrates ☐

4) In _____ phase of cell cycle DNA replication occurs.
   a) G_0 phase ☐ b) G_1 phase ☐
   c) S phase ☐ d) G_2 phase ☐

5) All of the following are basic amino acid except _____
   a) Lysine ☐ b) Arginine ☐
   c) Histidine ☐ d) Glutamase ☐

6) The chemical name of Edmans reagent is _____
   a) Phenyl isothiocynate ☐
   b) Cynogen bromide ☐
   c) 1-fluro – 2, 4-dinitrobenzene ☐
   d) Dansyl chloride ☐

7) The codon which is responsible for the inhibition of protein synthesis is _____

a) AUG ☐ b) UAG ☐

c) AAG ☐ d) GAU ☐

8) The sugar moiety present in DNA structure is _____

a) Ribose ☐ b) Deoxyribose ☐

c) Ribulose ☐ d) Oxyribose ☐

9) _____ nucleotide is absent in structure of DNA.

a) Adenylate ☐ b) Guanylate ☐

c) Uridylate ☐ d) Thymidylate ☐

10) cAMP is

a) 3' 5' adenosine monophosphate ☐

b) 3' adenosine monophosphate ☐

c) 5' adenosine monophosphate ☐

d) None of the above ☐

11) Lipmann introduced the symbol~ (p) indicating _____

a) Covalent bond ☐

b) Low energy phosphate bond ☐

c) High energy phosphate bond ☐

d) All of the above ☐

12) Hydrolysis of ATP is an example for _____ reaction.

a) Exogenic ☐ b) Endergonoic ☐

c) Exergonic ☐ d) Catalytic ☐

13) One of the following is not a purine.

a) Adenine ☐ b) Uric acid ☐

c) Thymine ☐ d) Guanine ☐

14) The enzyme which involves the transfer of functional group is _____

a) Transferases ☐ b) Ligases ☐

c) Oxidoreductases ☐ d) Isomerases ☐

15) In non-competitive inhibition _____

a) Km value is unchanged, Vmax is increased ☐

b) Km value is unchanged, Vmax is lowered ☐

c) Km value is unchanged ☐

d) Km value and Vmax is lowered ☐

16) The rate limiting reaction in urea cycle is catalyzed by the enzyme _____

a) Carbamoyl phosphate synthase I ☐

b) Ornithine transcarbamoylase ☐

c) Arginosuccinate ☐

d) Arginase ☐

_____

SLR-G – 9

Seat No.	

B.Pharm. (Semester – II) Examination, 2014

BIOCHEMISTRY – II

Day and Date : Thursday, 22-5-2014 Marks : 64
Time : 10.00 a.m. to 1.00 p.m.

SECTION – I

2. Solve **any four** : **16**

   1) Describe structure of t RNA. Give types of RNA.

   2) Write in detail about biological functions of protein.

   3) Write note on decarboxylation of amino acid.

   4) Write note on reversible enzyme inhibition.

   5) What are energy rich compounds ? Give suitable examples.

   6) What is primary structure of protein.

3. Solve the following : **16**

   1) Describe the factors affecting enzymatic actions. **8**

   2) Write detail account on protein biosynthesis. **8**

   OR

   What is transamination and deamination in amino acid metabolism ? Write in detail.

SECTION – II

4. Solve **any four** : **16**

   1) Define protein and classify it.

   2) Define and classify enzymes.

3) Draw structure of any four amino acids.

4) What is genetic code ? Give its characteristic features.

5) Write note on biological oxidation and redox potential.

6) Explain lock and key theory and induced fit theory.

5. Solve the following : **16**

1) How primary structure of protein is determined ? **8**

2) Write in detail account on replication of DNA. **8**

OR

Describe in detail electron transport chain. Give its inhibition.

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