

Registration No :

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Total Number of Pages : 01

B.Pharm
BP401T

4th Semester Regular Examination 2018-19
PHARMACEUTICAL ORGANIC CHEMISTRY - III
BRANCH : B.Pharma

Max Marks : 75

Time : 3 Hours

Q.CODE : F124

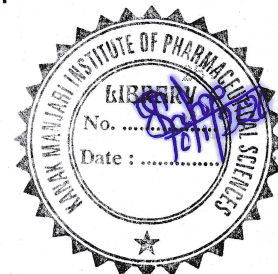
Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.
The figures in the right hand margin indicate marks.

- Q1** **Part- A** **Objective Answer Type Questions (Answer All)** (2 x 10)
- a) Write down the structures of stereoisomers formed when cis-2-butene is reacted with bromine.
- b) Differentiate between diastereomers and enantiomers.
- c) Describe the isomerism exhibited by maleic acid and fumaric acid.
- d) Explain the term chiral molecule.
- e) State the necessary condition for a compound to show optical isomerism.
- f) Explain the term Meso compound.
- g) Write about conformational isomerism.
- h) Why do not you expect geometrical isomers in case of 2-butyne.
- i) Write down the structure of the following compounds:
i) Imidazole ii) Indole iii) Quinoline iv) Thiazole
- j) State Clemmensen reduction.

- Q2** **Part- B** **Focused-Short Answer Type Questions- (Answer Any Seven)** (5 x 7)
- a) Define the term stereoisomerism and classify it with examples.
- b) Write notes on Fischer's projection.
- c) Explain E and Z system of nomenclature with examples.
- d) Write short notes on resolution of racemic modification.
- e) Explain R and S system of nomenclature with examples.
- f) Write notes on conformational isomerism of n-Butane.
- g) Explain stereospecific reaction.
- h) Discuss the general methods of preparations of Furan.
- i) Discuss the chemical properties of Imidazole.

- Part-C**
Long Answer Type Questions (Answer Any Two)
- Q3** Discuss the synthesis, chemical reaction and medicinal uses of Pyrrole. (10)
- Q4** Discuss the synthesis, chemical reaction and medicinal uses of Pyrazole. (10)
- Q5** Explain the methods of preparation and chemical reaction of Pyridine. (10)
- Q6** Write short notes on : (10)
- a) Wolff-Kishner reduction
- b) Claisen Schmidt reaction

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Total Number of Pages : 01

B.Pharm
BP402T

4th Semester Regular Examination 2018-19

MEDICINAL CHEMISTRY - I

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 75

Q.CODE : F244

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.
The figures in the right hand margin indicate marks.

Part- A

Q1 Objective Answer Type Questions (Answer All) (2 x 10)

- How Bio-isosters classified, give example.
- State Henderson-Hassel Bach equation for acid & base.
- Write the structure and IUPAC name of Bitolterol.
- Outline the importance of Partition coefficient in drug design.
- Write the chemistry & uses of Physostigmine.
- Outline the synthesis of Carbachol.
- Write the structure and IUPAC name of Morphine.
- How you differentiate sympathetic and Parasympathetic neurotransmitter.
- Write MOA of Tolazoline.
- Write Mechanism of action of Opioids.

Part- B

Q2 Focused-Short Answer Type Questions- (Answer Any Seven) (5 x 7)

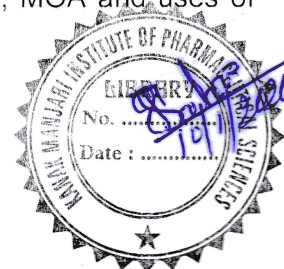
- Explain Phase-I Principle for Drug metabolism.
- Explain the bio-synthetic pathways of Catecholamine.
- Write down the synthesis MOA and uses of Salbutamol.
- Explain SAR of Aryl-Ethanol-amines as β - blocker.
- Write the synthesis, MOA and uses of Neostigmine.
- Distinguish between Cholinergic agonists and antagonist with example, write detail on Ipratropium bromide.
- Explain MOA of Anti-convulsant with reference to the drug Phenytoin.
- Explain the chemistry and outline the synthesis of Diazepam.
- Classify NSAID with example. Give synthetic route and uses of Mefenamic acid.

Part-C

Long Answer Type Questions (Answer Any Two)

- Q3** Classify antipsychotics with suitable examples. Describe SAR of Butyrophenones, taking the example of Haloperidol. (10)
- Q4** Define Hypnotic and sedative. Classify it with examples. Discuss SAR of Barbiturates. (10)
- Q5** Classify Parasympatholytics drugs with examples. Discuss SAR of Cholinolytic agent. Write structure and uses of Atropine Sulphate. (10)
- Q6** Classify General anaesthetics with examples. Describe synthetic route, MOA and uses of Methohexital sodium and Ketamine Hydrochloride (10)

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Total Number of Pages : 01

B.Pharm
BP403T

4th Semester Regular Examination 2018-19

PHYSICAL PHARMACEUTICS-II

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 75

Q.CODE : F381

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.
The figures in the right hand margin indicate marks.

Part- A

Objective Answer Type Questions (Answer All)

(2 x 10)

- State mobility and kinematic viscosity.
- Define light powders and heavy powders with example.
- Differentiate between under size and over size frequency distribution in powders.
- Zero order reactions are dependent upon the concentration of reactant. Comment.
- What is plug flow? How can it be minimized?
- State porosity. Derive the expression to determine it.
- Write the relationship among true solution, coarse suspension and colloids.
- Write Gold number with its Significance.
- State electro-kinetic and electro-dynamic in colloids.
- How does suspension differ from emulsion?

Part- B

Focused-Short Answer Type Questions- (Answer Any Seven)

(5 x 7)

- Describe briefly the applications of micromeritics in pharmacy.
- State Specific surface. Write down any two methods for its determination.
- Differentiate between Newtonian flow and non-Newtonian flow.
- Write down any two methods to purify colloids.
- Explain rheological properties of suspension.
- State half-life and shelf life of drug, and derive these for a drug following 1st order degradation kinetics.
- Explain Donnan membrane effect with suitable example.
- Describe different graphic presentations of size distribution data in powders.
- Explain briefly different types of tests to identify the types of emulsion.

Part-C

Long Answer Type Questions (Answer Any Two)

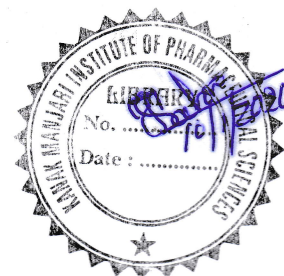
Q3 Define Non-Newtonian flow of liquid. Describe the principle, construction of cup-bob over the advantage point in cone-plate method. (10)

Q4 Discuss accelerated stability study for determining the shelf life of drug. Write down its applications and limitations. (10)

Q5 State colloid. Classify different type of colloid with suitable examples. (10)

Q6 Write the principle, construction and working of Coulter-Counter apparatus for the determination of particle size of powders. (10)

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B.Pharm
BP404T

4th Semester Regular Examination 2018-19

PHARMACOLOGY-I

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 75

Q.CODE : F520

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.
The figures in the right hand margin indicate marks.

Part- A

Q1 Objective Answer Type Questions (Answer All) (2 x 10)

- Define therapeutic index. How it will be calculated?
- What is competitive antagonism? Write one example.
- Define synergism with examples.
- What is Co-transmission?
- Benzodiazepines are preferred over barbiturates –comment.
- Differentiate Tolerance & Dependence.
- What is vesicular reuptake during neurohumoral transmission of noradrenaline? Write one example of its vesicular reuptake inhibitor.
- State the mechanism of local anaesthetics with one example.
- Name any two opioid antagonist with their uses.
- What are anorectics? Write their uses.

Part- B

Q2 Focused-Short Answer Type Questions- (Answer Any Seven) (5 x 7)

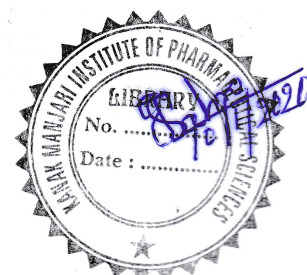
- Explain different Phase-II metabolic reaction with suitable examples.
- Briefly describe about the different types of drug interactions with examples.
- Briefly enumerate about the different phases of clinical trial.
- Give a brief account on the treatment of parkinsonism disease.
- Classify and write about the common pharmacological actions of alpha adrenergic blockers.
- Write the mechanism, adverse effect and uses of phenytoin.
- Write a note on centrally acting muscle relaxants,
- Describe any five factors modifying the action of drugs.
- Explain about the different types of adverse drug reactions with suitable examples.

Part-C

Long Answer Type Questions (Answer Any Two)

- Q3 Classify β adrenergic blockers. Describe the pharmacology of propranolol. (10)
- Q4 Define analgesics. Classify opioid analgesics with examples and write about the pharmacological action of morphine. (10)
- Q5 Classify anticholinergic drugs with examples. Explain about the pharmacological action atropine. (10)
- Q6 Classify sedatives and hypnotics. Write M.O.A., adverse effect and uses of benzodiazepines. (10)

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B.Pharm
BP405T

4th Semester Regular Examination 2018-19

PHARMACOGNOSY I

BRANCH : B.Pharma

Max Marks : 75

Time : 3 Hours

Q.CODE : F668

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Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.
The figures in the right hand margin indicate marks.

Part- A

Q1 Objective Answer Type Questions (Answer All)

(2 x 10)

- Write the biological source and uses of Agar.
- Define Ayurveda.
- Write about organoleptic evaluation of crude drugs.
- What is soil fertility?
- State the definition of hybridization.
- Write the general properties of volatile oil.
- Write the biological source and therapeutic uses of Papain.
- Define optical rotation.
- Write the biological source and uses of Bees wax.
- State the biological source and chemical constituents of Hemp.

Part- B

Q2 Focused-Short Answer Type Questions- (Answer Any Seven)

(5 x 7)

- Write a note on Soil.
- Differentiate organized and unorganized drugs with examples.
- What is mutation? Write the different types of mutation.
- Write the applications of Auxin and Cytokinin.
- Illustrate the applications of plant tissue culture.
- Explain in details about natural allergens with examples.
- Illustrate the pharmacognostical profile of Honey.
- Distinguish between primary and secondary metabolites.
- Explain the biological source, chemical nature and uses of Cotton.

Part-C

Long Answer Type Questions (Answer Any Two)

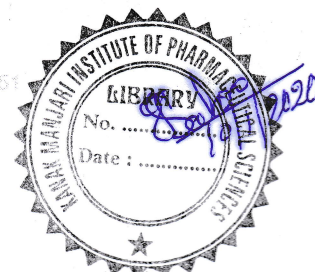
Q3 Describe the different conditions involved in adulteration and different types of adulterants. (10)

Q4 Discuss in detail about the culture media used in plant tissue culture. (10)

Q5 Classify crude drugs with suitable examples in details. (10)

Q6 Describe the different methods of pest control management. (10)

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Total Number of Pages : 02

B.Pharm.
15PH401

4th Semester Regular / Back Examination 2017-18

PHYSICAL PHARMACEUTICS- II

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 100

Q.CODE : C579

Answer Question No.1 & No. 2 which are compulsory and any four from the rest.
The figures in the right hand margin indicate marks.

Answer all parts of a question at a place.

Q1 Answer the following questions: (2 x 10)

- a) Edmunds equation is -----.
- b) Reynolds number is -----, the flow is turbulent. .
- c) Stream scanning method is used to measure the particle -----, and unsuitable for -----materials.
- d) Particle size in the range of -----micrometer can be measured by optical microscopy.
- e) Excellent flow property Angle of repose is -----.
- f) Relation between bulk density and tap density for porosity is -----.
- g) Plug flow can be minimized by -----and -----.
- h) Mixing of acacia a negative colloid with gelatin positive colloid results-----.
- i) Stability study of emulsion heating and cooling cycle, the temperature should be ----- and----- degree centigrade respectively.
- j) The Rheological behavior of CMC and micro-betonies having ----- ratio is more suitable when compared to individual suspending agent.

Q2 Answer the following questions: (2 X 10)

- a) Write Hatch-Choate equation.
- b) Differentiate between Newtonian flow and Non-Newtonian flow.
- c) What is HLB scale? Write two application of it.
- d) What is glidant? Write two suitable examples of it?
- e) Define fluidity and mobility according to rheology.
- f) Differentiate between Flocculated and deflocculated suspension.
- g) Write the relation among colloid, true solution and coarse suspension.
- h) What is Bancroft's rule for preparation of emulsion?
- i) Define electro-dynamic potential and kinetic potential.
- j) The viscosity of benzene is 5.816 mill poise at 25°C. Its density at 25°C is 0.8702g/cc. What is the kinematic viscosity of benzene at 25°C.

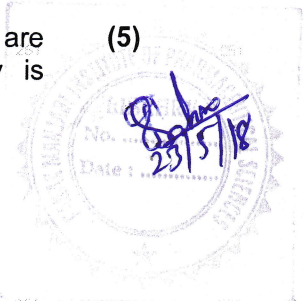
Q3 a) Write the principle and method involved in the determination of particle size in a powder using Coulter-Counter apparatus. (10)

b) Describe different graphic presentations of size distribution data in a powder. (5)

Q4 a) What is specific surface of particles? Describe one method to determine it experimentally. (10)

b) Estimate the specific surfaces, S_w and S_v , of griseofulvin IP. Particles are assumed to be spheres having d_{vs} of 3micrometer. The true density is 1.455gm/cc. (5)

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- Q5 a) Explain Non-Newtonian type of flow with rheograms, mechanisms and suitable examples. (10)
b) Write the principle and working of Ostwald viscometer. (5)
- Q6 a) With relevant mathematical equation, give the construction, working and disadvantages of Cup and Bob viscometer. (10)
b) Write short notes on Bulges and Spurs. (5)
- Q7 a) Classify different types of Colloids giving their salient features and examples. (10)
b) Describe any two methods for purification of colloids. (5)
- Q8 a) Discuss the factors which improve the physical stability of emulsions. (10)
b) Describe the mechanisms of action of co-solvents and surfactants in dispersion of solids in water. (5)

Q9 Write Short notes on (ANY THREE)

- a) Identification tests of Emulsion
b) BET equation
c) Rheological properties of suspension.
d) Donnan membrane.
e) Application of colloids in pharmacy.

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Total Number of Pages : 02

B.Pharm.
15PH402

4th Semester Regular / Back Examination 2017-18

PHARM. ENGINEERING - II

BRANCH : B.Pharma

Time: 3 Hours

Max marks: 100

Q.CODE : C655

Answer Section 'A' which is compulsory and any Four from Section 'B'.

The figures in the right hand margin indicate marks.

Answer all parts of a question at a place.

Section-A

(2x10)

Q1 Answer the following questions :

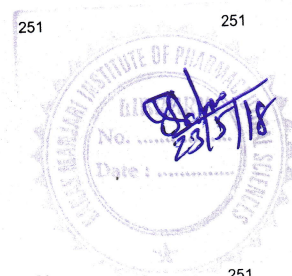
- a) The flow of the fluid is said to be turbulent if Reynolds no is greater than -----.
- i) 2100 ii) 3100 iii) 4000 iv) 1100.
- b) Which one of the following is a secondary refrigerant?
- i) Ammonia ii) Brine iii) Ethylene iv) Diclorotetrafluoro ethane.
- c) De Laval clarifier is used for -----.
- i) Clarification ii) Filtration iii) Sedimentation iv) Centrifugation.
- d) Urea refers to ----- type of crystal form.
- i) Hexagonal ii) Cubic iii) Tetragonal iv) Monoclinic
- e) Which is use to increase the pressure energy of a liquid?
- i) Valve ii) Blower iii) Fan iv) Pump.
- f) Which conveyor is used for transporting heavy loads at short runs and low speeds?
- i) Apron ii) Belt iii) Screw iv) Pneumatic
- g) Stainless steel is an alloy of ----- ?
- i) Cr ii) Fe iii) Ni iv) Cu
- h) Which is an inhibitor for corrosion of metal?
- i) CuSO₄ ii) MgSO₄ iii) FeSO₄ iv) ZnSO₄.
- i) Which component is used as extinguisher to suppress fire?
- i) SO₂ ii) CO₂ iii) SiO₂ iv) Fe₂O₃.
- j) Camphor vapour undergo ----- process in crystal formation.
- i) Crystallization ii) Precipitation iii) Sublimation iv) Super saturation

Q2 Answer the following questions:

(2 x 10)

- a) Define Reynolds number and write its significance.
- b) What is boundary wall concept in flow of fluids?
- c) What is Dew point?
- d) Define Centrifugation and name two centrifugal sedimenters.
- e) Write are advantages of glass as material of construction.
- f) Define Industrial Dermatitis.
- g) Define the term Nucleation.
- h) What is Ostwald ripening?
- i) Define valves and name two examples.
- j) What is Humid heat?

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Total Number of Pages : 02

B.Pharm
15PH403

4th Semester Regular / Back Examination 2017-18

BIOCHEMISTRY

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 100

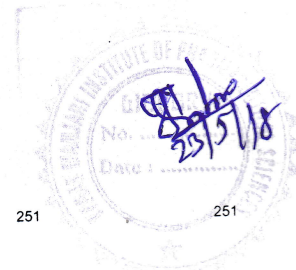
Q.CODE : C759

Answer Part-A which is compulsory and any four from Part-B.
The figures in the right hand margin indicate marks.
Answer all parts of a question at a place.

Part – A (Answer all the questions)

- Q1** Answer the following questions: *Choose the correct answer :* (2 x 10)
- a) Which test is performed to detect the presence of ketone bodies in urine?
A. Rothera's test B. Hay's test C. Gmelin's test D. Heller's test
- b) Protein is a polymer of :
A. Sugars B. Phenols C. Amino acids D. Carboxylic acid
- c) Malonate is a competitive inhibitor of
A. Succinate B. Fumarate C. Malate D. Lactate
- d) In glycolysis, glucose is converted to glucose-6-phosphate in presence of enzyme
A. Glucokinase B. Phosphoglucumutase C. Lipase D. Enolase
- e) In β -oxidation of fatty acid, the number of ATP molecule consumed are
A. 6 B. 2 C. 5 D. 4
- f) Which of the following is classified as a polysaccharide?
A. Saccharin B. Starch C. Lactose D. Maltose
- g) Deficiency of folic acid will cause
A. Anemia B. Rickets C. Diabetes D. Beriberi
- h) Conversion of glucose to pyruvic acid is known as
A. Urea cycle B. Glycolysis C. TCA cycle D. Cori cycle
- i) Which of the following vitamins has a structure similar to the steroid?
A. Vitamin D B. Vitamin B₁₂ C. Vitamin A D. Vitamin K
- j) Michaelis - Menten equation is used to explain the effect of substrate concentrations on :
A. Carbohydrate B. Enzyme C. Lipid D. Protein
- Q2** Answer the following questions : (2 x 10)
- a) Differentiate between hexokinase and glucokinase.
- b) Why citric acid cycle is said to be amphibolic in nature?
- c) What do you mean by isoenzymes? Give two examples of isoenzymes.
- d) What is ketoacidosis? How it can be treated?
- e) What is the cause of Refsum's disease?
- f) What do you mean by oxidative phosphorylation?
- g) What does happen in the excess intake of vitamins?
- h) Explain Okazaki fragments.
- i) What is Wald's visual cycle?
- j) Explain about suicidal inhibition.

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Total Number of Pages : 02

B.Pharm.
15PH404

4th Semester Regular / Back Examination 2017-18
COMPUTER APPLICATION
BRANCH : B.Pharma

Time: 3 Hours
Max Marks: 100
Q.CODE : C881

Answer Part-A which is compulsory and any four from Part-B.
The figures in the right hand margin indicate marks.
Answer all parts of a question at a place.

Part – A (Answer all the questions)

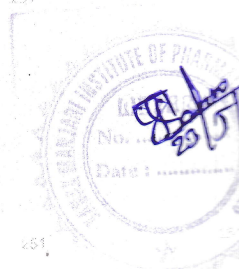
(2 x 10)

Q1

Answer the following questions :

- a) Which of the followings is not true in case of 1st generation computers.
i) Large size
ii) Generates more heat
iii) Portable
iv) None
- b) The base of a Octal number system is _____.
i) 2
ii) 8
iii) 16
iv) 10
- c) Which of the followings is a relational operator.
i) '+'
ii) '*'
iii) '!='
iv) '*='
- d) _____ is the 2's compliment of the binary number 10110?
i) 01001
ii) 01010
iii) 10101
iv) None
- e) 'www.' is the computer network of the type _____.
i) WAN
ii) MAN
iii) LAN
iv) None
- f) do..... while is the _____ statement used in java .
i) Jumping
ii) Branching
iii) Looping
iv) None
- g) Which of the followings data type accept a decimal number?
i) int
ii) double
iii) short
iv) char
- h) _____ type box is used to contain output statements in a Flow Chart.
i) Oval
ii) Parallelogram
iii) Rectangular
iv) Trapezium
- i) Which of the followings is not an input device.
i) Monitor
ii) Compact Disc
iii) Floppy Disc
iv) Punched Card
- j) _____ is/are the valid output method/s in java.
i) print()
ii) println()
iii) printf()
iv) All

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- 251 251 251 251 251 251
- b. L-Form
 c. Both D- And L- form
 d. None of the above
- (g) Lipids on agitation with water in presence of soap or gelatin form
 a. Suspension
 b. Emulsion
 c. Elixir
 d. Tincture
- 251 251 251 251 251
- (h) Out of the following which one give more energy:
 a. 1 gm. of lipid and fats
 b. 2 gm. of glucose
 c. 1 gm. of proteins
 d. Equal energy
- (i) Out of the following which one is a scleroprotein
 a. Zein
 b. Globulin
 c. Hair
 d. None of the above
- 251 251 251 251 251
- (j) Which one of the following is a derived lipid:
 a. Cholesterol
 b. Fat
 c. Waxes
 d. Oils

Part-B

- 251 251 251 251 251 251
- Q3.** a) Define and classify carbohydrates with suitable examples. Write the chemical properties of glucose.
 b) Discuss the chemical composition and chemical properties of starch.
- Q4.** a) Describe the structure, nomenclature, methods of preparation and chemical reactions of Benzimidazole.
 b) Write down the structure and synthesis of Pyrimidine.
- 251 251 251 251 251 251
- Q5.** Write short note on :
 (a) Reformatsky reaction and its mechanism
 (b) Nucleic acids
 (c) Beckmann rearrangement and its mechanism
- Q6.** Write short note on:
 (a) Pericyclic reaction
 (b) Electrocyclic reaction
 (c) Claisen rearrangement reaction
- 251 251 251 251 251 251
- Q7.** a) Define and classify amino acids. Write the methods of preparation and chemical reactions of amino acids.
 b) Define proteins and classify proteins with suitable examples.
- Q8.** a) Define and classify lipids and fats with suitable examples. Write down the chemical properties of lipids and fats.
 b) Write a short note on purification of proteins.
- 251 251 251 251 251 251
- Q9.** Discuss the mechanism of reactions of the followings :
 (a) Mannich reaction
 (b) Oppenaur oxidation
 (c) Michael reaction

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Total Number of Pages : 02

B.Pharm
15PH406

4th Semester Regular / Back Examination 2017-18
MATHEMATICS & STATISTICS

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 100

Q.CODE : C991

Answer Section 'A' which is compulsory and any Four from Section 'B'.
The figures in the right hand margin indicate marks.
Answer all parts of a question at a place.

Section 'A'

Q1 Answer all questions :

(2 x 10)

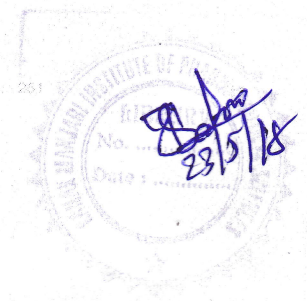
- a) $\int_0^1 \frac{1}{1+x^2} dx = \underline{\hspace{2cm}}$ $(\frac{\pi}{4}, 0, -1, \frac{\pi}{4})$
- b) $\int_1^2 x dx = \underline{\hspace{2cm}}$
- c) The degree of $\sin \frac{x}{y}$ is $\underline{\hspace{2cm}}$ (0,1,2,3)
- d) The roots of the equation $y'' - 3y' - 4y = 0$ is $\underline{\hspace{2cm}}$
- e) $L\{1\} = \underline{\hspace{2cm}}$ $(\frac{1}{p}, \frac{1}{p^2}, \frac{2}{p}, \frac{2}{p^2})$
- f) The Laplace Transform of $\sin at$ is $\underline{\hspace{2cm}}$
- g) The arithmetic mean of first '10' natural numbers is $\underline{\hspace{2cm}}$
(3.5, 2.5, 4.5, 5.5)
- h) In Probability, the value of $p + q$ is $\underline{\hspace{2cm}}$
- i) Binomial distribution has $\underline{\hspace{2cm}}$ parameters.
- j) In Poisson distribution, mean = $\underline{\hspace{2cm}}$

Q2 Answer all questions :

(2 x 10)

- a) Evaluate : $\int \frac{x^2}{1+x^2} dx$
- b) Evaluate: $\int e^x \sin x dx$
- c) Solve: $x \frac{dy}{dx} = \sqrt{1-y^2}$
- d) What is Integrating Factor?
- e) What is Inverse Laplace Transforms?
- f) Evaluate: $L\{\cos 2t\}$
- g) What is median?
- h) Calculate the mean of 1,3,5,7,9,11
- i) If the mean of a Poisson distribution is 4, find Variance.
- j) Define Normal Distribution.

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Section 'B'

Q3 a) Evaluate : $\int \frac{x^2}{(x+1)(x-2)(x+3)} dx$ (8)

b) Evaluate : $\int_0^\pi \frac{dx}{2+\cos x}$ (7)

Q4 a) Solve : $\frac{dy}{dx} = \frac{x+y+4}{x-y-6}$ (8)

b) Solve the initial value problem:
 $\frac{dy}{dx} + 5y = 3e^x, y(0) = 1$ (7)

Q5 a) Solve the equation
 $y'' + 2y' + 2y = 2, \text{ given that } y(0) = 0, y'(0) = 1$ (8)

b) Find the inverse transform of
 $\frac{p+7}{p^2+2p+5}$ (7)

Q6 a) Compute the variance from the following data (8)

Class(x)	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	8	12	17	14	9	7	4

b) The values of the same 15 students in two subjects A & B are given below, the two numbers within the brackets denoting the ranks of the same students in A & B respectively.
 (1,10) (2,7) (3,2) (4,6) (5,4) (6,8) (7,3) (8,1) (9,11) (10,15) (11,9) (12,5) (13,14) (14,12) (15,13)
 Use Spearman's formula to find the rank correlation coefficient. (7)

Q7 a) Compute the variance of Poisson Distribution. (8)

b) What is normal distribution? Highlight its important properties. (7)

Q8 a) Evaluate: $\int \frac{2}{\sqrt{(x^2+x+1)}} dx$ (5)

b) Solve: $\frac{d^2y}{dx^2} - \frac{dy}{dx} - 6 = 0$ (5)

c) Find L(cos²2t) (5)

Q9 a) Write short note on Skewness. (5)

b) A bag contains 7 red, 12 white and 4 green balls. What is the probability that 3 balls drawn are all white and 3 balls drawn are one of each colour? (5)

c) A certain drug was administered to 500 people out of a total of 800 included in the sample to test its efficacy against typhoid. The results are given below:

	Typhoid	No. Typhoid	Total
Drug	200	300	500
No Drug	280	20	300
Total	480	320	800

On the basis of these data, can it be concluded that the drug is effective in preventing typhoid. (5% value of χ^2 for one degree of freedom=3.84)

Registration No :

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Total Number of Page : 01

B.Pharm
PH.4.7

4th Semester Back Examination 2017-18
COMPUTER APPLICATIONS
BRANCH : B.Pharma
Time : 3 Hours
Max Marks : 70
Q.CODE : C882

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.
Answer all parts of a question at a place.

Q1 Answer the following questions :

(2 x 10)

- Name two popular first generation computers.
- Name two types of storage devices used in 2nd/3rd generation computers.
- Convert (110100) binary number to Decimal and Hexadecimal number.
- Name two slots/ports available with the computer mother board?
- Write mathematical operators used in C –programs.
- Express $D = \sqrt{b^2 - 4ac}$ into correct 'C' expression.
- Write about the use of DOS command DIR.
- What is WAN? Give examples.
- Name two websites used for drug related information.
- Write a simple 'c' program using *printf* statement.

Q2 Write notes on the followings :

(5+5)

- First generation computers.
- Computer Block Diagram

Q3 Write about the following DOS commands with options :
CD, MD, DIR and PROMPT.

(10)

Q4 Write notes on computer network topologies.

(10)

Q5 Write about various types of boxes/figures used to draw flow chart and draw the Flow Chart to find the Sum = 1+3+5+.....+49.

(10)

Q6 Give the syntax, use and example of 'C' statements
If..... and do.....while.

(5+5)

Q7 Write notes on (i) Operating System (ii) Machine Level Language

(10)

Q8 Write about the application of computers in Hospitals.

(10)

123

