



Kisan Vidya Prasarak Sanstha's
Institute of Pharmaceutical Education, Boradi

2.2.1 The institution assesses the learning levels of the students and organises special Programmes for advanced learners and slow learners

INDEX

Sr. No.	Particular	Page No.
PROGRAMS FOR ADVANCED LEARNERS		
1	Participation in Avishkar	1-2
2	Participation in Seminars and Workshop	3-9
3	Guest Lectures	10-11
4	Honours of Academic achiever	12
SPECIAL PROGRAMS FOR SLOW LEARNERS		
5	Question bank	14-16
6	Notes	17-21
7	Tutorial classes data	22-23
8	Solved University question paper	24-57



Kisan Vidya Prasarak Sanstha's

Institute of Pharmaceutical Education, Boradi

PROGRAMS FOR ADVANCED LEARNERS

- ✦ College has specific planned programs for advanced learners for encouraging them to participate in various competitions for research project, poster presentation, model making competition at University/State/National and International level.
- ✦ The advanced learners are encouraged to attend seminar, workshops, guest lectures and industrial visits.
- ✦ Arrangements are made for coaching for competitive exams like GPAT for higher studies.
- ✦ The academic achievers from each class are awarded with medal and certificate during Independence day and Republic day Celebration. Flag hosting is done by the academic achievers from each class during Independence day and Republic day Celebration



INTERDISCIPLINARY RESEARCH PROJECTS PRESENTED AT AVISHKAR

K.B.C.North Maharashtra University Jalgaon organizes "AVISHKAR", a research project competition, every academic year. Faculty members allot research project to the students and guide them for "AVISHKAR" competition providing a platform to groom their creativity, innovation, analytical and presentation skills. Interdisciplinary research projects are carried out by students and presented in AVISHKAR research competition conducted by K.B.C.North Maharashtra University Jalgaon.

**List of Interdisciplinary research projects presented at District Level Avishkar
Competition Sponsored by KBC, North Maharashtra University, Jalgaon**

Academic Year (2023-24)

Student Name	Course	Year	Title	Level
PG STUDENT CATEGORY				
Sagar Gangaram Patil, Kunal Dilip Patil	PG	M.Pharm	Immunity Buster Herbal Plant: During COVID-19 Pandemic	District Level Poster Competition AVISHKAR organized by KBC, NMU
Samiksha Pramod Kotkar, Pruthvi Prakash Khamkar	PG	M.Pharm	Medicinal Plants with Abortifacient Potential	District Level Poster Competition AVISHKAR organized by KBC, NMU
UG STUDENT CATEGORY				
Rohit Manoj Patil	UG	B. Pharm	Dosage/Medication Reminder Aids	District Level Poster Competition
Dhakad Kashish Kundan, Gaikwad Manish Santosh	UG	B. Pharm	In Vitro Study of Drug Remdesivir	AVISHKAR organized by
Sagar Gangaram Patil, Gaikwad Harsh Ravikant	UG	B. Pharm	Formulation for COPD	District Level Poster Competition

				AVISHKAR organized by KBC, NMU
Gore Kiran Ramesh, Mahajan Chetna Ramesh	UG	B. Pharm	Formulation and Evaluation of Wound Healing Polyherbal Ointment	District Level Poster Competition AVISHKAR organized by KBC, NMU
Jayesh Ravindra Khaimar, Bhairav Bhagwan Ishi	UG	B. Pharm	Antidiabetic Activity of Carica Papaya and Syzygium Cumini	District Level Poster Competition AVISHKAR organized by KBC, NMU
Rajput Upasana Mahendra, Sen Isha Santosh	UG	B. Pharm	Formulation and Standardization of Antifungal and Antibacterial Ointment	District Level Poster Competition AVISHKAR organized by KBC, NMU
Tejas Eknath Patil, Labhesh Gokul Patil	UG	B. Pharm	3D Printing in Pharmaceutical and Medical Sector	District Level Poster Competition AVISHKAR organized by KBC, NMU
Kranti Manohar Valhe, Mahek Vijay Sain	UG	B. Pharm	The World's First PET Eating Bacterium	District Level Poster Competition AVISHKAR organized by KBC, NMU
Raj Yograj Pawar, Prashant Bharat Patil	UG	B. Pharm	Concept of Autophagy	District Level Poster Competition AVISHKAR organized by KBC, NMU



Kisan Vidya Prasarak Sanstha's

Institute of Pharmaceutical Education, Boradi



PARTICIPATION IN SEMINARS

ACADEMIC YEAR: 2023-24

REPORT OF ONE DAY SEMINAR ON

Title of activity: A Seminar on Current trends on cGMP in Pharmaceutical Industry

Date and Venue: 10 oct2023 and venue KVPS'S Institute Of Pharmaceutical Education Boradi

MODE OF SEMIBNAR: Offline

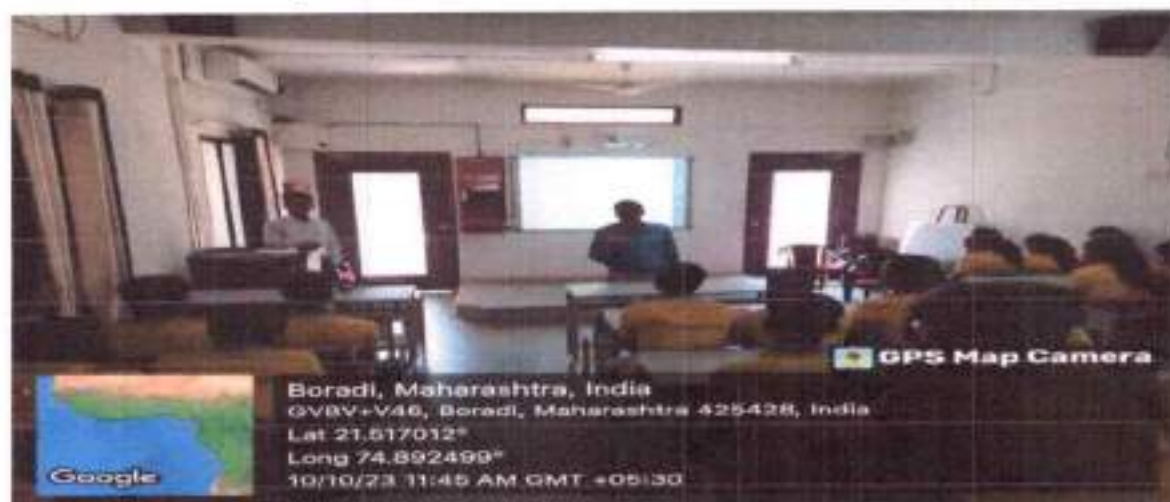
Description of activity:

On the occaassion of CGMP day KVPS'S Institute of Pharmaceutical education organised A Seminar on CURRENT TRENDS ON CGMP IN PHARMACEUTICAL INDUSTRY. Mr. Dipak Suruyawanshi manager QA department from Mylan industry was invited as special guest and resource person for this seminar.

Mr.Gaurav Patil sir give in brief of the objective behind the seminar and give introduction to the students of the speaker Mr. Dipak Suruyawanshi. Mr. Dipak Suruyawanshi sir interacts with the student regarding the importance of practices of c GMP in the industry. He focuses on the skills and knowledge required for the cGMP professionals in industry which is beneficial for the budding pharmacist. He stated that pharmaceutical product should be safe, clean, free from allergens, no substituents and adulterants should be detected during the manufacturing process. He also stated that all the process should be done asper the protocol designed by GMP of pharmaceuticals.

Mr. Hharshajeet sir gives votes of thanks after concluding session.

No. of Student Participated: 105





Kisan Vidya Prasarak Sanstha's

**Institute of Pharmaceutical
Education, Boradi.**



(IDMA celebrating National cGMP day)



फार्मास्युटिकल औद्योगिक क्षेत्रात निगा राखली : पाहिजे- दिपक सुर्यवंशी

स्वतंत्र भारत

बोराडी । प्रतिनिधी



आरोग्याबाबत औषधांची गुणवत्ता महत्वाची असते म्हणून फार्मास्युटिकल औद्योगिक क्षेत्रात औषधांची गुणवत्ता राखणे हे अतिशय महत्वापूर्ण आहे. असे प्रतिपादन नाशिक येथील मायलन प्रयोगशाळेचे तंत्रज्ञ दिपक सुर्यवंशी यांनी केले. किसान विद्या प्रसारक संस्थेच्या बोराडी येथील इन्स्टिट्यूट ऑफ फार्मास्युटिकल एज्युकेशन महाविद्यालयाने एकदिवसीय कार्यशाळा संपन्न झाली. यावेळी महाविद्यालयाचे प्राचार्य डॉ. विकास पाटील, उपप्राचार्य कल्याणकुमार एस बापू, समन्वयक प्रा. हर्षजोत मिसरोदे इ. उपस्थित होते. वद्यार्थ्यांना मार्गदर्शन करताना सुर्यवंशी यांनी सांगितले की, उत्पादन सुरक्षित

आणि स्वच्छ असले पाहिजे. मानवी कापरासाठी उत्पादनास असुरक्षित बनवणारे भेसळ करणारे आणि फॅलर्जेन्सपासून क्रीम-दूधित होण्यापासून रोगव्यायासाठी उत्पादन सुविधांनी नियमित पर्यावरणीय परिस्थिती राखली पाहिजे. उत्पादन प्रक्रिया स्पष्टपणे परिभाषित आणि नियंत्रित केल्या पाहिजेत. सुसंगतता आणि वैशिष्ट्यांचे पालन सुनिश्चित करण्यासाठी सर्व प्रक्रिया प्रमाणित केल्या जाऊन, म्हणून उत्पादन प्रक्रिया नियंत्रित करणे आवश्यक असते आणि प्रक्रियेतील कोणत्याही बदलांचे मूल्यांकन करणे आवश्यक आहे. औषधाच्या गुणवत्तेवर परिणाम

करणारे बदल आवश्यकतेनुसार प्रमाणित केले जाऊन, तसेच औषध उत्पादन क्षेत्रातील अनेक महत्वापूर्ण गोष्टी सांगितल्या. यावेळी सर्व शिक्षक शिक्षकेतर कर्मचारी उपस्थित होते. अभार प्रकल्पाचे समन्वयक प्रा. हर्षजोत मिसरोदे यांनी मानले. या उपक्रमाचे संस्थेचे अध्यक्ष डॉ. तुषार रंधे, सचिव निशांत रंधे, खनिशदर अश्रातहर्ष रंधे, प्रधानमंत्री आत्मनिर्भर भारत संघटनेचे जिल्हाध्यक्ष राहुन रंधे, नगरसेवक रोहित रंधे कर्मवीर पंतसंस्थेचे चेअरमन शशांक रंधे, विश्वरत शामकांत पाटील यांनी कोतुरु केले.

Sign of Co-ordinator

Principal
Principal
Institute of Pharmaceutical
Education Boradi-425 428



Kisan Vidya Prasarak Sanstha's

Institute of Pharmaceutical Education, Boradi



**REPORT OF TWO DAY WORKSHOP ON HANDS ON TRAINING OF HPLC : A
PRACTICAL APPROACH**

Title of activity: TWO DAY WORKSHOP ON HANDS ON TRAINING OF HPLC: A
PRACTICAL APPROACH in association with R.S.I.T.C Jalgaon.

Date and Venue: 19/03/2024 and 20/03/2024

Description of activity:

KVPS'S Institute of Pharmaceutical education organised TWO DAY WORKSHOP ON HANDS ON TRAINING OF HPLC: A PRACTICAL APPROACH in association with R.S.I.T.C Jalgaon. Hon. Principal Dr. Vikas. P. Patil gives information about the achievements of our sansthas and institute to the eminent resource person Mr. Vispute Anil, director of R.S.I.T.C Jalgaon.

Mr. Anil Vispute sir on the first day gives the detailed theoretical information about the instrumentation and the parts of the instruments to the students of M. Pharm and B. Pharm. He shares his experience with the instrument to the student with the experimentation and also shares how to overcome the various troubleshooting problems that arise during its operation.

On day two, their experiments are conducted on HPLC instrument and each student is trained for handling of the HPLC instruments.

Dr. Sachin Mahajan sir gives votes of thanks after concluding the session.



INTRODUCTORY SESSION ON HANDS ON TRAINING OF HPLC dated 19 th March 2024





TWO DAY WORKSHOP ON HANDS ON TRAINING OF HPLC dated 19 th and 20 th March 2024


 Sign of Coordinator


Principal
 Institute of Pharmaceutical
 Education Boradi-425 428



Kisan Vidya Prasarak Sanstha's

Institute of Pharmaceutical Education, Boradi



Guest Lecture for GPAT Aspirants

REPORT OF ONE DAY SEMINAR ON "CAREER DEVELOPMENT, GPAT PREPARATION AND SOFT SKILL DEVELOPMENT"

Title of activity: One day seminar on "career development, GPAT preparation and soft skill development" by Dr Piyush jaiswal, Director GDC Class

Date and Venue: 28 Feb 2024 venue KVPS'S Institute Of Pharmaceutical Education Boradi

MODE OF SEMIBNAR: Offline

Description of activity: KVPS'S Institute of Pharmaceutical education organised One day work shop on CAREER DEVELOPMENT, GPAT PREPARATION AND SOFT SKILL DEVELOPMENT". Mr. Amol pawar sir gives brief introduction to the resource person of the seminar Dr. Piyush jaiswal. Dr. Piyush Jaiswal founder and director of GDC academy for GPAT and competitive examination gives in the information about the importance of GPAT and NIPER exam in the future career of pharmacist. He also focus on the innovative way to prepare for the GPAT and NIPER examination. He interacts with students especially with respect to government entrance examination which are specially for pharmacy students such as DI, Hospital pharmacist, Pharmacist in PHC, Government Pharmacist.

Mr. Gaurav patil sir concluded the session with vote of thanks.

No. of Student Participated: 144

संस्कृत

युनायटेड खान्देश

14/11/2022 (संपादक संपादक)

संपादक संपादक - संपादक संपादक

संपादक - 21

संपादक - 21 - Email: unitedkhandesh@gmail.com

संपादक - 2

संपादक - 2

संपादक - 2 संपादक - 2022

बोराडी फार्मसी महाविद्यालयात जी-पॅट परीक्षेची तयारी आणि सॉफ्ट स्किल्स विकासावर चर्चासत्र

(संपादक संपादक संपादक)

बोराडी स.सि.पु. वि. २-
बोराडी फार्मसी महाविद्यालय
जी-पॅट परीक्षेच्या तयारीसाठी
विद्यार्थ्यांना वेळोवेळी सत्रे
आणि सॉफ्ट स्किल्स
विकासावर चर्चासत्रे
आणि सॉफ्ट स्किल्स
विकासावर चर्चासत्रे

विद्यार्थ्यांना वेळोवेळी
आणि सॉफ्ट स्किल्स
विकासावर चर्चासत्रे
आणि सॉफ्ट स्किल्स
विकासावर चर्चासत्रे



बोराडी फार्मसी महाविद्यालय
जी-पॅट परीक्षेच्या तयारीसाठी
विद्यार्थ्यांना वेळोवेळी सत्रे
आणि सॉफ्ट स्किल्स
विकासावर चर्चासत्रे

बोराडी फार्मसी महाविद्यालय
जी-पॅट परीक्षेच्या तयारीसाठी
विद्यार्थ्यांना वेळोवेळी सत्रे
आणि सॉफ्ट स्किल्स
विकासावर चर्चासत्रे

बोराडी फार्मसी महाविद्यालय
जी-पॅट परीक्षेच्या तयारीसाठी
विद्यार्थ्यांना वेळोवेळी सत्रे
आणि सॉफ्ट स्किल्स
विकासावर चर्चासत्रे

बोराडी फार्मसी महाविद्यालय
जी-पॅट परीक्षेच्या तयारीसाठी
विद्यार्थ्यांना वेळोवेळी सत्रे
आणि सॉफ्ट स्किल्स
विकासावर चर्चासत्रे

Sign of Co-ordinator

Principal
Institute of Pharmaceutical
Education Boradi-425 428



Kisan Vidya Prasarak Sanstha's

Institute of Pharmaceutical Education, Boradi



HONOUR OF THE ACADEMIC ACIEVERS

The academic achievers from each class are awarded with medal and certificate during Independence day and Republic day Celebration. Flag hosting is done by the academic achievers from each class during Independence day and Republic day Celebration

Academic Achievers from first term are honored on Republic day and Academic Achievers from second term are honored on Independence day.





SPECIAL PROGRAMS FOR SLOW LEARNERS

Slow learner will be given assignments; instructions and most importantly support to improve their performance.

- ✚ Question banks are provided to the students containing important questions on the topic and frequently asked questions in the University examination.
- ✚ Solved University examination question papers are given to the students.
- ✚ Students are encouraged to watch videos/recorded lectures uploaded on Whats app groups of respective subjects for students. for better understanding of the subject.
- ✚ Notes are provided in class room and uploaded on Whats app groups of respective subjects for students. The power point presentations are also uploaded Whats app groups of respective subjects for students..
- ✚ Tutorial/Remedial Classes are organized for selected subjects.
- ✚ Assignments are given to the students to enhance self-learning.
- ✚ Students having poor performance in in-semester assessment tests/sessional examination are given an opportunity to appear for re-assessment/improvement sessional examination.
- ✚ Individual attention is given to the students, where sessions are conducted to solve student's difficulties/doubts.
- ✚ The institute organizes orientation programmes, communication workshop, personality development programmes for improvement of the soft skill of the students.



SAMPLE QUESTION BANK PROVIDED BY TEACHER

Subject : Pharmacology-III (BP602T)

Semester: VI

Name of Subject Teacher: Mr. Vikas Prakash Patil

Type of Question: short questions and Long questions.

Sub- Pharmacology-III (BP602-T)

1. Drugs acting on respiratory system

- Define Bronchial asthma? Classify anti-asthmatic agent. Explain the MOA, pharmacological action, adverse effects and therapeutic uses of xanthine derivatives.
- Define Bronchial asthma? Classify anti-asthmatic agent with pharmacological action of bronchodilators.
- Write a note on COPD.
- Write a note on antitussives and expectorants.
- Write a note on nasal decongestants
- Write a note on respiratory stimulants.

2. Pharmacology of drugs acting on the Gastrointestinal Tract

- Define and classify antiulcer drugs. Explain the MOA, pharmacological action, adverse effects and therapeutic uses of antiulcer drugs.
- Define and classify antiemetics drugs. Explain the MOA, pharmacological action, adverse effects and therapeutic uses of antiemetics drugs.
- Write a note on drugs used for constipation and diarrhoea.
- Write a note on appetite stimulants and suppressants.
- Write a note on Digestants and carminatives.

3. Toxicology

- Explain the symptoms and treatment of acute barbiturate poisoning
- Define Toxicology? Explain the different types of toxicity studies in animals.
- Define poison? Explain the different types of poison based on type of action and explain the steps for removal of poison.
- Explain the symptoms, mechanism and treatment of arsenic poisoning.
- Explain the symptoms, mechanism and treatment of heavy metal poisoning.
- Explain the symptoms, mechanism and treatment of morphine poisoning.
- Define Toxicology? Explain the different types of general toxicity studies in animals.

- h) Explain the symptoms, mechanism and treatment of acute barbiturate poisoning.
- i) Define Toxicology? Explain the different types of specialized toxicity studies in animals.
- j) Explain the symptoms, mechanism and treatment of organophosphorous poisoning.

3. Chemotherapy

- a) Define Chemotherapy? Give the classification of antimicrobial agents based on chemical structure. Explain factors affecting for choice of antimicrobial agents.
- b) Write a note on Urinary tract infection.
- c) Explain the MOA, antimicrobial action and therapeutic uses of tetracycline.
- d) Write a note on chloramphenicol.
- e) Define Cephalosporin? Give its classification, Mechanism of action, antimicrobial action, and therapeutic uses of cephalosporin.
- f) Explain the MOA, classification and therapeutic uses of aminoglycosides.
- g) Write a note on sexually transmitted diseases.
- h) Write a note on cotrimoxazole.
- i) Define Chemotherapy? Give the classification of antimicrobial agents based on chemical structure. Explain factors affecting for choice of antimicrobial agents.
- j) Give its classification, Mechanism of action, antimicrobial action, and therapeutic uses of sulphonamides.
- k) Explain the MOA, classification, antimicrobial action and therapeutic uses of aminoglycosides.
- l) Define penicillin? Give the classification of semisynthetic penicillin, Mechanism of action, antibacterial action, pharmacokinetics, adverse effects and therapeutic uses of penicillin.
- m) Define sulphonamide? Give its classification, Mechanism of action, antimicrobial action, pharmacokinetics, adverse effects and therapeutic uses of sulphonamide.
- n) Define Cephalosporin? Give its classification, Mechanism of action, antimicrobial action, and therapeutic uses of cephalosporin.
- o) Define anti-TB drugs. Give its classification, Mechanism of action, antimicrobial action, pharmacokinetics, adverse effects and therapeutic uses of anti-TB drugs.
- p) Define anti-leprotic drugs. Give its classification, Mechanism of action, antimicrobial action, pharmacokinetics, adverse effects and therapeutic uses of anti-leprotic drugs.
- q) Define anti-fungal drugs. Give its classification, Mechanism of action, antimicrobial action, pharmacokinetics, adverse effects and therapeutic uses of anti-fungal drugs.
- r) Define anti-viral drugs. Give its classification, Mechanism of action, antimicrobial action, pharmacokinetics, adverse effects and therapeutic uses of anti-fungal drugs.
- s) Define anthelmintics drugs. Give its classification, Mechanism of action, antimicrobial action, pharmacokinetics, adverse effects and therapeutic uses of anthelmintics.
- t) Define anti-malarial drugs. Give its classification, Mechanism of action, antimicrobial action, pharmacokinetics, adverse effects and therapeutic uses of anti-malarial.

- u) Define anti-amoebic drugs. Give its classification, Mechanism of action, antimicrobial action, pharmacokinetics, adverse effects and therapeutic uses of anti-amoebic.
- v) Write a note on chemotherapy of malignancy.

4. Immunopharmacology

- a) Write a note on Immunostimulants and immunosuppressants.
- b) Write a note on monoclonal antibodies.
- c) Define and classify immunosuppressants. Explain the MOA, pharmacokinetics, adverse effects and therapeutic uses of cyclosporine.
- d) Explain the MOA, pharmacokinetics, adverse effects and therapeutic uses of Tacrolimus.
- e) Explain the MOA, pharmacokinetics, adverse effects and therapeutic uses of Mtor inhibitors.

5. Toxicology

- a) Explain the symptoms and treatment of acute barbiturate poisoning
- b) Define Toxicology? Explain the different types of toxicity studies in animals.
- c) Define poison? Explain the different types of poison based on type of action and explain the steps for removal of poison.
- d) Explain the symptoms, mechanism and treatment of arsenic poisoning.
- e) Explain the symptoms, mechanism and treatment of heavy metal poisoning.
- f) Explain the symptoms, mechanism and treatment of morphine poisoning.
- g) Explain the symptoms, mechanism and treatment of organophosphorus poisoning.
- h) Define Toxicology? Explain the different types of general toxicity studies in animals.
- i) Explain the symptoms, mechanism and treatment of acute barbiturate poisoning.
- j) Define Toxicology? Explain the different types of specialized toxicity studies in animals.

6. Chronopharmacology

- a) Discuss the chronopharmacology in details along with their significance.
- b) Write a note on biological rhythm.



SAMPLE NOTES PROVIDED BY TEACHER

Adrenostimulants / catecholamines

Sympathomimetic / Adrenergic drugs

- These are the drugs which produce responses similar to that of sympathetic nerve stimulation.
- many of these drug contains in their chemical structure amine group (NH_2). so they are called as sympathomimetic amines.

Classification -

A) chemical classification -

- 1) catecholamines - They contain presence of OH group at the third & fourth position of benzene ring (catechol nucleus).

eg - Adrenaline

noradrenaline

dopamine

Isoprenaline.

2) Non catecholamines - They do not contain

OH group at the 3rd & 4th position of benzene ring.

eg - Ephedrine

Amphetamine

B) Therapeutic classification -

- 1) Use to raise blood pressure -

eg - Nor adrenaline

methoxamine.

- 2) Use as positive inotropic agents - ^{↑ force of contraction of muscle}

eg - Dopamine

Isobutamine

Xamoterol.

- 3) Smooth muscle relaxants -

eg - Adrenaline

4) Local Vasoconstrictor -

eg - Adrenaline
phenylephrine

5) Use in allergic conditions -

eg - Adrenaline
ephedrine

6) Use as CNS stimulant

eg - Amphetamine

7) Use as appetite suppressant

eg - Fenfluramine.

Mechanism of action -

Catecholamines directly combines with adrenergic receptors which are present on cell membrane.

There are 2 types of receptors for catecholamines α receptors & β receptors.

1) α receptors are of 2 types α_1 & α_2

2) β receptors are of 3 types β_1 , β_2 & β_3 .

1) α_1 receptors are present in -

- a) Blood vessels supplying to skin & mucous membrane.
- b) Radial muscle of iris
- c) male sex organs.

2) α_2 receptors are present in -

- a) Pancreatic cells, platelets & certain blood vessels.

1) β_1 receptors are present in heart.

2) β_2 receptors are present in blood vessels supplying to skeletal muscles.

- smooth muscle of G.I.T, urinary tract, bronchi, uterus & eye.

BBB - semipermeable membrane ^{barrier} that separates the circulating blood from the brain & extracellular fluid in the CNS.
Adrenaline when injected after the use of α -blockers it mainly produces fall in BP instead of rise.
eg - Esgotopin.

1) Smooth muscles -

a) Bronchial smooth muscles - Adrenaline produces potent bronchodilation of smooth muscles.

b) G.I.T - Relaxation of smooth muscles of G.I.T.

c) Urinary bladder - Relaxation of muscles. The sphincter are constricted.

2) Uterus - Effect on uterus depends on species present at gestation.
- Rat uterus always relax
- On human pregnant uterus relax & non pregnant contracted.

3) Metabolism - On carbohydrate metabolism adrenaline increases blood sugar level (hyperglycemia) by accelerating glycogenolysis in liver.

- On lipid metabolism - increase FFA (Free fatty acid) level by increase lipolysis - breaking down of lipids.

4) CNS - Catecholamine poorly cross blood brain barrier so no significant effect.

5) Respiration -

Improvement in respiration with adrenaline because of bronchodilation.

Adrenaline action - Adrenaline is a physiological antagonist of histamine & counter the bronchoconstriction & hypotension of anaphylactic shock.

irregular heart beat

cause allergic reaction

Adverse effect - involuntary movement due to contraction of opposite muscle.
palpitation, tremors, severe hypertension, arrhythmias & acute pulmonary edema.

irregular rhythm

caused by excess fluid in lungs, difficult to breathe

Therapeutic uses -

- 1) In acute bronchial asthma by s.c injection of 0.5-1 ml in 1:1000 solⁿ.
- 2) In acute anaphylaxis.
- 3) Cardiac resuscitation - adrenaline injected immediately 0.3 mg in heart chamber.
- 4) Dental extraction - To control bleeding.
- 5) nasal decongestant.

nm - catecholamines -

Ephedrine - It is a alkaloid obtained from ephedra plant.

Pharmacological actions -

1) CVS -

Heart - It increases force of contraction of heart, ↑ cardiac output, BP ↑.

2) Smooth muscles -

① It relaxes bronchial smooth muscle.

② V.B. smooth muscle relaxes.

3) CNS - It stimulates CNS & produces restlessness, tremors, insomnia.

4) ^{cytotoxic factor} cytolysis. For ^{relaxation} Relaxation of myo.

$\frac{d}{dt} \left(\frac{1}{\rho} \right) = - \frac{1}{\rho^2} \frac{d\rho}{dt}$

- weakness of statistical model:
 - data not with ^{same} uniform distance

2. анализиране на резултатите

е гипертензии,

11

- contraction of waste spiracles
- reduces acting on
- used with feeding

moderate
weight in
severe & some
occasional

Recursos

- RT-
adverse effects).



Kisan Vidya Prasarak Sanstha's
Institute of Pharmaceutical Education, Boradi

TUTORIAL LECTURES TIME TABLE

Kisan Vidya Prasarak Sanstha's
Institute of Pharmaceutical Education, Boradi
(B. Pharm.)
TIME TABLE (2023/2024)
w.e.f. 28 Aug 2023

CLASS - First Y.B. Pharm sem-I

YEAR - Aug 2023

SEMESTER-I (DIVISION-A)

Days	(Practical) 11.00 a.m. to 2.00 p.m.				(Theory) 2.30 pm to 3.30 pm	(Theory) 3.30 pm to 4.30 pm	(Theory) 4.30 pm to 5.30 Pm	(Theory) 5.30 pm to 6.30 Pm
	Batch A	Batch B						
Monday	C.S.S.S	H.A.P.-1	B E C E S P E B E O D	H.A.P.-1	P.H.-1	P.A.-1	Ramoth meth/Biology	
Tuesday	P.A.-1	P.H.-1		P.H.-1	H.A.P.-1	P.A.-1	Ramoth meth/Biology	
Wednesday	H.A.P.-1	P.A.-1		P.A.-1	P.H.-1	H.A.P.-1		
Thursday	P.H.-1	C.S.S.S		P.H.-1	C.S.S.S	P.A.-1		
Friday	P.H.-1	off		P.H.-1	Tutorial	P.H.-1		
Saturday	off	P.H.-1		C.S.S.S	P.H.-1	H.A.P.-1		

Academic Coordinator

Vice-Principal
VICE PRINCIPAL
 Institute of Pharmaceutical
 Education Boradi-425 426

Principal
Principal
 Institute of Pharmaceutical
 Education Boradi-425 426

Kisan Vidya Prasarak Sanstha's
Institute of Pharmaceutical Education, Boradi
(B. Pharm.)
TIME TABLE (2023/2024)
W.e.f. 11 Sep 2023

CLASS - First Y. B. Pharm Sem-I

YEAR - Sep 2023

SEMESTER-I (DIVISION-B)

Days	(Practical) 11.00 a.m. to 2.00 p.m.			(Theory) 2.30 pm to 3.30 pm	(Theory) 3.30 pm to 4.30 pm	(Theory) 4.30 pm to 5.30 Pm	(Theory) 5.30 pm to 6.30 Pm
	Batch A	Batch B					
Monday	C.S.S.S	P.H.-1	B	C.S.S.S	P.H.-1	H.A.P.-1	Ramoth meth/Biology
Tuesday	P.H.-1	off	E	P.H.-1	P.H.-1	P.H.-1	Ramoth meth/Biology
Wednesday	off	P.H.-1	C	P.H.-1	C.S.S.S	P.A.-1	
Thursday	H.A.P.-1	C.S.S.S	S	P.A.-1	H.A.P.-1	P.H.-1	
Friday	P.H.-1	P.A.-1	P	P.H.-1	H.A.P.-1	P.A.-1	
Saturday	P.A.-1	H.A.P.-1	E	H.A.P.-1	P.H.-1	P.A.-1	
			B				

Academic Coordinator

Vice-Principal
VICE PRINCIPAL
 Institute of Pharmaceutical Education
 Boradi-425 426

Principal
Principal
 Institute of Pharmaceutical Education
 Boradi-425 426



Kirti Yashwantrao Sawade's
Institute of Pharmaceutical Education, Boradi
(B. Pharm.)
TIME TABLE (2023/2024)
w.e.f. 07 Sep 2023



CLASS: - Second Y. B. Pharm Sem-III

YEAR: -Sep 2023

SEMESTER-III(DIVISION-A)

Days	(Theory) 11.00 a.m. to 12.00 p.m.	(Theory) 12.00 p.m. to 1.00 p.m.	(Theory) 1.00 p.m. to 2.00 p.m.	2.00 pm to 2.30 pm	(Practical) 2.30 p.m. to 5.30 p.m.		
					Batch A	Batch B	Batch C
Monday	MICRO	POC-II	MICRO [Tutorial]	A	POC-II	MICRO	OFF
Tuesday	POC-II	MICRO	POC-II [Tutorial]	C	OFF	POC-II	MICRO
Wednesday	MICRO	POC-II	OFF	S	MICRO	OFF	POC-II
Thursday	PH-ENG	P.P-I	PH-ENG [Tutorial]	F	PH-ENG	P.P-I	OFF
Friday	PH-ENG	P.P-I	OFF	R	OFF	PH-ENG	P.P-I
Saturday	P.P-I	PH-ENG	P.P-I [Tutorial]	O	P.P-I	OFF	PH-ENG

S.S.
Academic Coordinator

M. S.
VICE PRINCIPAL
Institute of Pharmaceutical Education, Boradi (425 426)

V.P.
Principal
Institute of Pharmaceutical Education, Boradi (425 426)



Kirti Yashwantrao Sawade's
Institute of Pharmaceutical Education, Boradi
(B. Pharm.)
TIME TABLE (2023/2024)
w.e.f. 07 Sep 2023



CLASS: - Second Y. B. Pharm Sem-III

YEAR: -Sep 2023

SEMESTER-III(DIVISION-B)

Days	(Theory) 11.00 a.m. to 12.00 p.m.	(Theory) 12.00 p.m. to 1.00 p.m.	(Theory) 1.00 p.m. to 2.00 p.m.	2.00 pm to 2.30 pm	(Practical) 2.30 p.m. to 5.30 p.m.		
					Batch D	Batch E	Batch F
Monday	P.P-I	PH-ENG	PH-ENG [Tutorial]	B	PH-ENG	P.P-I	OFF
Tuesday	P.P-I	PH-ENG	P.P-I [Tutorial]	C	OFF	PH-ENG	P.P-I
Wednesday	P.P-I	PH-ENG	OFF	S	P.P-I	OFF	PH-ENG
Thursday	POC-II	MICRO	MICRO [Tutorial]	F	POC-II	MICRO	OFF
Friday	POC-II	MICRO	OFF	R	OFF	POC-II	MICRO
Saturday	POC-II	MICRO	POC-II [Tutorial]	O	MICRO	OFF	POC-II

S.S.
Academic Coordinator

M. S.
Vice-Principal
VICE PRINCIPAL
Institute of Pharmaceutical Education, Boradi (425 426)

V.P.
Principal
Principal
Institute of Pharmaceutical Education, Boradi (425 426)

SOLVED UNIVERSITY QUESTION PAPER BY FACULTY

[illegible]



Q.No.

Q.No.

2

Q.No.

3. Classify anxiolytic drugs & ex.

• Benzodiazepines

Alprazolam (Xanax)

Bromazepam (Lectopam, Lectotan)

Chlordiazepoxide (Librium)

Chlondazepam (Monopin, Rivotril)

Clobazepam (Frisone)

Diazepam (Valium)

Flurazepam (Dalmane)

Lorazepam (Ativan)

4. Give the drugs used in the treatment of parkinsonism.

The main types of drugs that are used to treat parkinson's are Levodopa, Dopamine agonists, Glutamate antagonist.

5. Define & classify Antipsychotic.

Definition:

Antipsychotic drugs don't cure psychosis but they can help to reduce and control many psychotic symptoms including delusions & from feeling threatened.



Q.No.

Q.No.

3

Q.No.

classification:

First Generation Antipsychotic.

- chlorpromazine
- prochlorperazine
- thioridazine.

Second Generation Antipsychotic.

- Aripiprazole
- Quetiapine
- Avenapine
- Quetiapine
- Clozapine
- Risperidone
- Iloperidone
- Ziprasidone
- Lurasidone
- Paliperidone.



Q.No.

Q.No.

4

Q.No.

Q-2. Any four.

e) Write a note on local anaesthetics.

Local anaesthetics (LA) are drugs which upon topical application or local injection cause reversible loss of sensory perception, specially of pain in a restricted area of the body. They block generation and conduction of nerve impulse at all parts of the neurone where they come in contact without causing any structural damage. Thus not only sensory but also motor impulses are interrupted when LA is applied to a mixed nerve control as well as.

Classification:

- low potency, short duration

procaine

chlorprocaine.

- Intermediate potency and duration

Lignocaine = (lidoaine)

prilidocaine.



Q.No.

Q.No.

5

Q.No.

- High potency, long duration.
Tetracaine (Amethocaine)
Bupivacaine*
Ropivacaine
Eubucaine (Chincona).

Mof:

The LA's block nerve conduction decreasing the entry of Na^+ ions during upstroke of a action potential (AP). As the concentration of the LA is increased, the rate of rise of AP and maximum depolarization decreases causing slowing to reach of the threshold potential and conduction block ensues.

Local Action:

The clinically used LA's have no minimal local irritant action & block sensory nerve endings, nerve trunk neuromuscular junction, ganglion, synapse and receptors (non-selectively).



Q.No.

Q.No.

6

Q.No.

ie. Structures which function through increases Na^+ permeability. They also reduce release of acetylcholine from motor nerve endings. Injected around a mixed nerve they cause anaesthesia of skin paralysis of Voluntary of muscle supplied by the nerve.



Q.No.

Q.No.

7

Q.No.

c) write a note on levodopa.

→ Levodopa has a specific salutary effect in PD. efficacy exceeding that of any other drug used alone. It is inactive by itself but is immediate precursor of the transmitter DA. more than 95% peripheral tissues (mainly gut and liver). DA thus formed as on heart blood vessel other peripheral organs and on CTZ (through located in the brain i.e. floor of IV ventricle is not bound by blood vessels other peripheral. About 1-2% of administered levodopa crosses the brain is taken up by the surviving dopaminergic neurones converted to DA which is stored and released as a transmitter. Brain of parkinson's patients treated with levodopa till death had DA levels higher than those not so treated. further, those patients who has responded well had.



Q.No.

Q.No.

8

Q.No.

higher DA levels than those who had responded poorly.

Actions:

• CNS:

Levodopa hardly produces any effect in normal individuals or in patients with other neurological disease. Marked symptomatic improvement occurs in parkinsonian patients. Hypokinesia and rigidity resolve first. Letter tremor as well as secondary symptoms of postural gait, handwriting, speech, facial expression, mood, self and interest in life are gradually.

• CVS:-

The peripherally formed DA can cause tachycardia acting on β adrenergic receptors. Though DA can stimulate vascular adrenergic receptors as well, rise in BP is not seen. Instead, postural hypotension



Q.No.

Q.No.

9

Q.No.

is quite common. This may be a central action - DA and NA formed in brain decrease sympathetic outflow; also DA formed in autonomic ganglia can impede ganglionic transmission.

• CTZ :-

Dopaminergic receptors are present in this area and DA acts as an excitatory transmitter. peripherally formed DA gains access to the CTZ without hindrance - elicits nausea and vomiting. Tolerance occurs to this action.

• Endocrine :

DA acts on pituitary mammothropes to inhibit prolactin release and on somatotropes to increase GH release though prolactin levels in blood fall during levodopa therapy increased GH level are not noted in parkinson patients.

†



Q.No.

Q.No.

10

Q.No.

pharmacokinetics :-

Levodopa is rapidly absorbed from the small intestines by utilizing the active transport process meant for aromatic amino acids.

↳ Gastric Emptying :- if slow, levodopa is exposed to degrading enzymes present in gut wall and liver for a longer time - less than is available to penetrate blood brain barrier.



Q.No.

Q.No.

11

Q.No.

a) Describe in detail pharmacology of Benzodiazepines.

Benzodiazepines:-

• Flumazenil -

It is a BZD analogue which has little intrinsic activity (practically no effect on normal subjects) but competes with BZD agonists as well as well as inverse agonist for the BZD receptors and reverses their depressant or stimulant effects respectively.

It abolishes the hypogenic, psychomotor, cognitive and EEG effects of BZD's.

At higher doses it has some weak BZD antagonist like as well as inverse agonist like activity, but these are of no clinical significance.

Flumazenil is absorbed orally undergoes high first pass metabolism in liver: oral bioavailability is ~ 16% but is not only on i.v. injection action starts in second and lasts for 1-2 hr elimination $t_{1/2}$ is 1 hr.



Q.No.

Q.No.

12

Q.No.

Uses:-

→ to reverse BZD anaesthesia
patient anaesthetized/sedated with
a BZD Wakeup + get oriented and
regain motor control within 1 min
of an iv injection of 0.2-0.5 mg of Flumazenil.

Sedation generally occurs after
1-2 hr course with diazepam than
it will may be given it.

→ BZD overdose:-

Flumazenil 0.2 mg/min is injected
iv (max 5 mg) till the patient regains
consciousness. practically all patient
intoxicated with a BZD are reversed
within 5 min. in mixed CNS depressant
poisoning, whatever sedation is not
abolished by 5 mg of Flumazenil
should be taken to be due to a
non BZD depressant. It helps in
differential diagnosis of such patients.



Q.No.

Q.No.

13

Q.No.

8) It has been tried in hepatic coma and acute alcohol intoxication with equivocal results.

Adverse effect:-

Flumazenil is safe and well tolerated.

Agitation, discomfort, tearfulness, anxiety, coldness and withdrawal seizures are the occasional side effect.



Q.No.

Q.No.

14

Q.No.

d) pharmacology of Alcohol:

1) Rubefacient and counterirritant to skin.

2) Irritant - soft skin and necrosis on injection.

3) pain, inflammation and necrosis on injection.

4) Astringent: Antiseptic (20-30%)
100% is dehydrating.

Effects of Alcohol:

Impaired performance, slowing of reflexes and fine discrimination impaired. Induces sleep but not ideal hypnotic. Analgesic but no ideal analgesic.

Mechanism:

GABA receptor mediated synaptic inhibition by chloride channel opening.

Inhibition of NMDA excitatory amino acid receptor.



Q.No.

Q.No.

15

Q.No.

EFFECTS OF Alcohol consumption :

CVS :-

small doses : cutaneous vasodilatation, flushing

medium doses : tachycardia and mild rise in
BP.

Large dose : vasodilation due to direct vascular
smooth muscle dilation & vasomotor centre

Respiration :

stimulation of respiration - by irritation
of pharyngeal and buccal mucosa.

Central action : depression.



Q.No.

Q.No.

16

Q.No.

Q-3

Any one:

- a) Define & classify sedative & hypnotics
Give the pharmacology of any one
long acting Barbiturates.

Sedative Defⁿ:-

→ drug that subdues excitement and calms the subjects without inducing sleep though drowsiness may be produced. Sedation refers to decreased responsiveness to any level of stimulation is associated with some decrease in motor activity in ideation.

Hypnotic:

→ drug that induces and/or main-
tains sleep, similar to normal
arousable sleep. This is not to be confused
with hypnosis meaning a trance like
state in which the subject becomes
passive and highly suggestible.



Q.No.

Q.No.

17

Q.No.

Classification :1. BarbituratesLong acting.short actingultra acting.

phenobarbitone

Barobarbitone

Thiopentone

Mephobarbitone

Secobarbitone

methohexitone

pentobarbitone

Hexobarbitone

2. Benzodiazepines :HypnoticAntianxiety

Diazepam

Diazepam

Flurazepam

Chlordiazepoxide

Nitrazepam

Oxazepam

Triazolam

Alprazolam

Midazolam

Furazepamol.

3. Newer Nonbenzodiazepine hypnotics.zopiclonezolpidem.



Q.No.

Q.No.

18

Q.No.

chloral hydrate, trichlorophos, paraldehyde, Glutethimide, methylphenone, methoqualone and meprobamate are historical sedative hypnotics no longer used they are described in earlier.

BARBITURATES:

Barbiturates have been popular hypnotics and sedatives of the last century upto 1960s but are not preferred now. However they are described first as they are the prototype of CNS depressants.

Barbiturates are substituted derivatives of barbituric acid (malonyl urea). Barbituric acid as such is not a hypnotic but compound with alkyl or aryl substitution on CS are. Replacement of O with S or CS yields thiobarbiturates which are more lipid soluble and more potent. Barbiturates have variable lipid solubility the more soluble ones are more potent and shorter acting they are insoluble in water but their sodium salts dissolve yielding highly alkaline solution.



Q.No.

Q.No.

19

Q.No.

pharmacological Action :

Barbiturates are general depressants for all excitable cells. The CNS most sensitive where the effect is almost global but certain areas are more susceptible.

1) CNS :- Barbiturates produce dose dependent effects:

sedation $\rightarrow$ sleep $\rightarrow$ anaesthesia $\rightarrow$ coma.

Hypnotic dose (100-200 mg of a short acting barbiturate) shortens the time taken to fall asleep and increase sleep duration. The sleep is arousable but the subjects may feel confused and unsteady if waken early. Night awakenings are reduced. REM and stage 3,4 sleep are decreased. REM-NREM sleep cycle is disrupted. The effects on sleep become progressively less marked if the drug is given every night consecutively.



Q.No.

Q.No.

20

Q.No.

Other system:

Respiration is depressed by relatively higher doses. Neurogenic, hypercapnic and hypoxic drives to respiratory centre are depressed in succession.

Barbiturates do not have selective antitussive action.

CVS Hypnotic doses of barbiturates produce a slight decrease in BP and heart rate; magnitude of change not differing from that during normal sleep. Toxic doses of barbiturates produce a slight decrease in BP and heart rate. Magnitude blockade, vasomotor centre depression and direct decreases in cardiac contractility.

Skeletal Muscle. Hypnotic doses have little effect but anaesthetic doses reduce muscle contraction by depressing excitability of neuromuscular junction.

Smooth muscle. Tone and motility of bowel is decreased slightly by hypnotic doses, more profoundly during intoxication.



Q.No.

Q.No.

21

Q.No.

Section - II.

Q-1. solve any ~~four~~ five.

b) Enlist male female sex hormones:

female sex hormones —

The ovaries of sexually mature females secrete

a mixture of estrogens of which 17 β estradiol is the most abundant (and most potent) and progesterone.

c) Define uterine stimulants & Relaxant.

→ Uterine stimulants (uterotonics or oxytocics) are medication given to cause a woman's uterus to contract or to increase the frequency and intensity of the contraction. The three uterotonic drugs used most frequently are the oxytocins, prostaglandins and forget abutaloids.

• Uterine Relaxant.

These are the drugs which decrease uterine motility.



Q.No.

Q.No.

22

Q.No.

d) Explain Mucolytics Agent:

- carbocysteine, magesone
- water inhalation via an aerosol
- Bromhexine
- Ambroxol
- Dornase α

Mucolytics are medicines that make the mucus less thick and sticky and easier to cough up. They are helpful if you have a long-term (chronic) cough because they help you cough up mucus from your lungs because they help you cough up mucus from your lungs. You may also see the term expectorant used to describe a type of cough medicine.

e) What is ligand binding assay.

→ A ligand binding assay (LBA) is an assay or an analytic procedure which relies on the binding of



Q.No.

Q.No.

23

Q.No.

ligand molecules to receptors antibodies or other macromolecules. This type of analytic test can be used to test for the presence of target molecules in a sample that are known to bind to the receptor.

9) Define & classify Expectorants.

Expectorants are "drugs that help in removing sputum from the respiratory tract either by:
increasing the fluidity or reducing the viscosity of sputum.

increasing the volume of fluids that have to be expelled from the respiratory tract by coughing.

Classification.

- 1) sedative expectorant
- 2) stimulant expectorant



Q.No.

Q.No.

24

Q.No.

Q.2 Any four.

- a) Describe in detail physiological actions, uses & effects of oxytocin.

→ oxytocin :-

Oxytocin is an octapeptide secreted by the posterior pituitary along with ADH. Pituitary extract was first used in labour in 1909 controversy as to whether the antidiuretic and uterine stimulating activities were due to one substance or two separate principles was finally resolved by du Vigneaud in 1953 when he separated oxytocin and ADH, determined their chemical structure and synthesized them.

Both oxytocin and ADH are synthesized within the nerve cell bodies in supraoptic and paraventricular nuclei of hypothalamus; are transported down the axon and stored in the nerve endings within the neurohypophysis.



Q.No.

Q.No.

25

Q.No.

Actions:-

1) Uterus :- oxytocin increases the force and frequency of uterine contractions. with low doses full relaxation occurs in between contractions basal tone increases only with high doses. increased contractility is due to heightened electrical activity of the myometrial cell membrane - burst discharges are initiated and accentuated.

Mechanism of action : Action of oxytocin is myometrium is independent of innervation

2) Breast :- oxytocin contracts myoepithelium of mammary alveoli and forces milk into the bigger milk sinuoids - milk ejection reflex (milk letdown in cattle) is initiated by the infant.

3) CVS :- conventional doses used in obstetrics have no effect but higher doses cause vasodilation by direct action $\rightarrow$ brief fall in BP, reflex tachycardia and flushing.

4) Kidney :- oxytocin in high doses exerts an ADH like action - urine output is decreased pulmonary edema can occur



Q.No.

Q.No.

26

Q.No.

b) Write a note on ELISA.

→ What is ELISA -

- Enzyme-linked immunosorbent assay (ELISA) is biochemical assay technique used mainly in immunology.

- It is plate-based assays designed for detecting and quantifying substance such as peptides, proteins, antibodies and hormones.

- first and most basic test determine if an individual is positive for a selected pathogen, such as HIV.

ELISA:-

A sensitive immunoassay that uses an enzymes linked to an antibody or antigen as a marker for the detection of a specific protein, especially an antigen or antibody. ELISA involves detection of analyte in a liquid sample using liquid reagent (wet lab) or dry strips (dry lab).

In dry analysis, strip can be read in spectrometry. The quantitative reading usually used on detection of intensity of transmitted light by



Q.No.

Q.No.

27

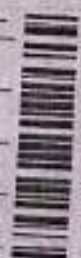
Q.No.

spectrophotometry at specific wavelength.

The sensitivity of detection depends on amplification of signal generated by enzyme which are linked to the detection reagents in fixed proportions to allow accurate quantification (enzyme linked).

There are two main methods of ELISA.

ELISA can be used to detect the presence of antigens that are recognized by an antibody.





Q.No.

Q.No.

28

Q.No.

→ Classify OHA. Discuss Metformin.

→ Oral Hypoglycaemic drugs.

These drugs lower blood glucose levels and are effective orally. The chief drawback of insulin is - it must be given by injection. Orally active drugs have always been searched.

The early sulfonamides tested in 1940s produced hypoglycaemia as a side effect. Taking this lead, the first clinically acceptable sulfonylurea tolbutamide was introduced in 1957. Others followed soon after. In the 1970s many so called second generation sulfonylureas have been developed which are 20-100 times more potent. A biguanidine, phenformin was found to be hypoglycaemic in the 1920s but was toxic.

Clinically useful biguanide metformin was developed parallel to sulfonylureas in 1957.



Q.No.

Q.No.

29

Q.No.

Classification:

sulfonylureas.

first generation

tolbutamide

chlorpropamide

second generation.

Glibenclamide

(Glyburide)

Gliclazide.

Biguanides

phenformin

metformin.

meglitinide analogues.

Repaglinide

nateglinide.

thiazolidinediones.

Rosiglitazone

pioglitazone

 α Glucosidase Inhibitors.

Acarbose

miglitol.



Q.No.

Q.No.

30

Q.No.

c) write a note on oral contraceptive.

→ Defn:- oral contraceptives are medicines taken by mouth to help prevent pregnancy. They are also known as birth control pills.

there are two types:-

① the combined pills:-

• formulation may be.

② Monophasic (each tablet contains a fixed amount of estrogen & progestin)

③ Biphasic (each tablet contains a fixed amount of estrogen, while the amount of progestin increases in the second half of the cycle or.

④ triphasic: (the amount of estrogen may be fixed or variable while the amount of progestin increases in 3 equal phases)

The estrogen in most combined preparations (second-generation pills) is ethinylestradiol, although a few preparations contain mestranol instead.



Q.No.

Q.No.

31

Q.No.

The progestogen may be norethisterone, levonorgestrel, ethynodiol or in third genⁿ pills desogestrel or gestodene which are more potent, have less androgenic action and cause less change in lipoprotein metabolism but which probably cause a greater risk of thromboembolism than do second genⁿ preparations:

The oestrogen content is generally 20-50 μ g of ethinylestradiol or its equivalent, and a preparation is chosen with the lowest oestrogen & progestogen content that is well tolerated & gives good cycle control in the individual woman.

The combined pill is taken for 21 consecutive days followed by 7 pill-free days which causes a withdrawal bleed.



Q.No.

Q.No.

32

Q.No.

solve any one.

a) Define Bioassay. Describe in detail diff. types of Bioassay.

→ Defn :-

Bioassays are procedures by which the potency or the nature of the substance is estimated by studying its effects on living matter. The basic principles of such assays is to compare how much of a sample being tested produces the same biological effects as a given quantity of a standard prep.

principle :-

- Burn and Dale enunciated certain principle for conducting bioassays.
- All bioassays must be comparative & and compared against a standard drug or preparation. This is to overcome errors due to biological variation.
- The standards and the new drug should be identical to each other so that either dose-response levels.
- The method for comparing the unknown and the standard should preferably test the therapeutic property of the drug.



Q.No.

Q.No.

33

No.

Ideally, an analgesic is tested for analgesic activity and an anti-convulsant for anticonvulsant activity. and as this is not always convenient or possible to do so. e.g. for estimating digitaloid drugs the cardiac arrest in pisson pig used as the end point; which is the toxic effect of the drug but not the therapeutic effect.

- The method should eliminate all possible errors and allow an estimation of the errors due to biological variation in different animals/persons at any one time and minimize errors due to biological variations. These include the selection of suitable animals/preparations and also then selection of the experimental conditions.
- The results of the should be subject to statistical analysis to minimize errors due to biological variation.

This type of assay give almost identical results.

- precision of assay demands
- quantity of the sample available
- availability of experimental animals.



Q.No.

Q.No.

34

Q.No.

1) Matching Dose Bioassay:

- It is based on the assumption of dose-response relationship. At first the concentration response curve due to graded doses of a standard substance followed by the dose response curve of the due to graded doses of detected from the respective DRs such that they lie on the linear portion of the DR.

Advantages:

The assay does not depend on the assumption of a dose response relationship.

Disadvantages:

- purely subjective method.
- precision and reliability are poor.

2) Bracketing Dose Bioassay:

- It is also a simple assay procedure which is employed when the test sample is very small.