

GPAT CELL, BCRCP
DR. B. C. ROY COLLEGE OF PHARMACY & AHS
Bidhannagar, Dugapur-713212

NOTICE

Date: 08/08/2023

This is to inform all GPAT aspirants (2024) that your GPAT grooming class will be commenced from 8th August 2023.

Time: 6.00 PM to 7.00 PM.

Class Room: CR-4

U. Bhunia
Coordinator 08/08/2023
GPAT CELL, BCRCP



[Signature]
Prof. (Dr.) Samir Kumar Samanta
M. Pharm., Ph.D (J.U.)
Principal
Dr. B. C. Roy College of Pharmacy & AHS
Durgapur, West Bengal-713206

GPAT CELL, BCRCP
DR. B. C. ROY COLLEGE OF PHARMACY & AHS
Bidhannagar, Dugapur-713212

NOTICE

Date: 19/07/2023

This is to inform all interested GPAT aspirants (2024) to register themselves for GPAT grooming class and Mock Test (Will be conducted online) in the Google form with following link by 25th July 2023.

Link for registration: <https://forms.gle/fbD7YaGhZUvaGeWW9>

M. D. Das
Coordinator 19/07/2023
GPAT CELL, BCRCP



[Signature]
Prof. (Dr.) Sanjay Kumar Samanta
M. Pharm., Ph.D (J.U.)
Principal
Dr. B. C. Roy College of Pharmacy & AHS
Durgapur, West Bengal-713206

Enrollment for GPAT Grooming Class/Mock Test (23-24)


GPAT Cell BCRCP (Responses) ☆ 📁 ☁

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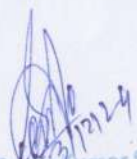
	A	B	C	D	E	F	G
1	Timestamp	Email Address	UNIVERSITY ROLL NO-NAME	DO YOU WANT TO ENR	IF YES, I WOULD LI	YOUR WHATSAPP NUMBER	
2	7/19/2023 16:48:52	ankitadeychakundi2002@gmail.com	18901920031 - ANKITA DEY	Yes	BOTH	9832755652	
3	7/19/2023 17:03:26	nayasitah98@gmail.com	18901920065 - SAYAN HATI	Yes	BOTH	9800380716	
4	7/19/2023 17:27:13	janapritam11@gmail.com	18901920073 - PRITAM JANA	Yes	BOTH	9547059472	
5	7/19/2023 17:28:24	rm201897@gmail.com	18901920022 - RITWIM MONDAL	Yes	APPEAR IN PRACTICE	8584985769	
6	7/19/2023 17:28:54	aritrانandy2020@gmail.com	18901920035 - ARITRA NANDY	Yes	BOTH	9883204703	
7	7/19/2023 19:47:46	mahichowdhury0909@gmail.com	18901920015 - MAHIMA CHOWDHUR	Yes	BOTH	9474389432	
8	7/19/2023 20:28:47	bhanjatapabrata@gmail.com	18901920034 - TAPABRATA BHANJA	Yes	BOTH	9883783685	
9	7/19/2023 23:04:57	nehadas8584@gmail.com	18901920038 - NEHA DAS	Yes	APPEAR IN PRACTICE	6291560983	
10	7/19/2023 23:47:19	guptantu1101@gmail.com	18901920069 - ANTARA GUPTA	Yes	BOTH	8101334364	
11	7/19/2023 23:50:38	amrita0606@gmail.com	18901920070 - AMRITA SINGHA	Yes	APPEAR IN PRACTICE	8637812938	
12	7/20/2023 11:04:33	ritwiksahoo13b@gmail.com	18901920045 - RITWIK SAHOO	Yes	BOTH	9641335117	
13	7/20/2023 11:04:43	maityagnith@gmail.com	18901920032 - AGNITH MAITY.	Yes	BOTH	9064154244	
14	7/20/2023 11:48:49	sayanmail4225@gmail.com	18901920033 - SAYAN NANDI	Yes	BOTH	7076404217	
15	7/20/2023 12:16:58	samratbanerjee41@gmail.com	18901920021 - SHYAMACHARAN BAN	Yes	BOTH	6296981447	


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 Durgapur, West Bengal-713206



M. Dhruv
 GPAT COORDINATOR
 21/11/24


1	A	B	C	D	E	F	G
	Timestamp	Email Address	UNIVERSITY ROLL NO-NAME	DO YOU WANT TO ENR	IF YES, I WOULD LI	YOUR WHATSAPP NUMBER	
15	7/20/2023 12:10:30	saptarshibhattacharjee1@gmail.com	18901920021 - SPTARSHIBHATTACHARJEE	Yes	BOTH	6290901447	
16	7/20/2023 20:03:49	saptarshibhattacharjee123@gmail.com	18901920075 - SAPTARSHI BHATTACHARJEE	Yes	APPEAR IN PRACTICE	9883203284	
17	7/20/2023 21:53:44	www.aysn99@gmail.com	18901920080 - AYUSH SEN	Yes	APPEAR IN PRACTICE	6001413834	
18	7/20/2023 21:53:49	touheedahamed7797@gmail.com	18901920002 - MD TOUHEED AHAME	Yes	APPEAR IN PRACTICE	7797990109	
19	7/20/2023 23:03:34	sarbartha2002@gmail.com	18901920050 - SARBARTHA DAS	Yes	BOTH	9883727362	
20	7/20/2023 23:04:04	subhramandal02@gmail.com	18901920096 - SUBHRAKANTA MANDAL	Yes	BOTH	9064467855	
21	7/20/2023 23:04:11	sd3264995@gmail.com	18901920037 - SUBHANKAR DAS	Yes	APPEAR IN PRACTICE	9641817114	
22	7/20/2023 23:09:43	gangulyarka7@gmail.com	18901920042 - ARKA GANGULY	Yes	APPEAR IN PRACTICE	9083015792	
23	7/20/2023 23:09:50	patrabilash817@gmail.com	18901920019 - BILASH PATRA	Yes	BOTH	7477854143	
24	7/20/2023 23:42:01	debsonasingha4@gmail.com	18901920014 - POULAMI SINGHA	Yes	BOTH	7908730778	
25	7/21/2023 2:06:55	fvvgvc39@gmail.com	18901920094 - APARESH BERA	Yes	APPEAR IN PRACTICE	9679764218	
26	7/21/2023 10:20:01	sumanadas2266@gmail.com	18901920064 - SUMANA DAS	Yes	BOTH	9832747055	
27	7/21/2023 12:41:19	mohananchandra3119@gmail.com	18901920027 - MOHAN CHANDRA BA	Yes	APPEAR IN PRACTICE	9382969526	
28	7/21/2023 18:39:17	pritamde607@gmail.com	18901920100 - PRITAM DE	Yes	BOTH	9883008702	
29	7/22/2023 10:57:27	sayakmondal27@gmail.com	18901921112 - SAYAK MONDAL	Yes	BOTH	9134784313	
29	7/22/2023 10:57:27	sayakmondal27@gmail.com	18901921112 - SAYAK MONDAL	Yes	BOTH	9134784313	
30	7/22/2023 10:58:09	atanujana1998@gmail.com	18901921108 - ATANU JANA	Yes	BOTH	9593921613	
31	7/22/2023 10:58:10	siddhantagtrs@gmail.com	18901921105 - SIDDHANTA MISHRA	Yes	BOTH	6296846774	
32	7/22/2023 12:54:06	debjyotidey16@gmail.com	18901921111 - DEBJYOTI DEY	Yes	APPEAR IN PRACTICE	9434845089	
33	7/22/2023 14:09:18	sohamk698@gmail.com	18901920040 - SOHAM KUNDU	Yes	BOTH	9734987998	
34	7/23/2023 11:46:36	bithikabanerjee@durgapur@gmail.com	18901920029 - BITHIKA BANERJEE	Yes	BOTH	7478452388	
35	7/23/2023 13:33:16	ghoshsathi613@gmail.com	18901920010 - SATHI GHOSH	Yes	BOTH	9832931339	
36	7/23/2023 14:46:11	banerjeeanwasha115@gmail.com	18901920043 - ANWESHA BANDYOPADHYAY	Yes	BOTH	7699242470	
37	7/24/2023 13:14:11	aniket.ojha.adtp@gmail.com	18901920012 - ANIKET OJHA	Yes	APPEAR IN PRACTICE	6290514973	
38	7/24/2023 13:14:46	samimhossain470078@gmail.com	18901920083 - SK SAMIM HOSSAIN	Yes	BOTH	8391820017	
39	7/24/2023 13:59:29	nabanitasen2002@gmail.com	18901920098 - NABANITA SEN	Yes	BOTH	6294718123	
40	7/24/2023 21:49:44	sandip123ruhidas@gmail.com	18901921115 - SANDIP RUHIDAS	Yes	BOTH	9647548752	
41	7/25/2023 15:23:30	dshrabani10@gmail.com	18901920078 - SHRABANI DAS	Yes	APPEAR IN PRACTICE	8972482090	


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M. Dhruv 21/8/24
 GPAT COORDINATOR

	A	B	C	D	E	F	G
1	Timestamp	Email Address	UNIVERSITY ROLL NO-NAME	DO YOU WANT TO ENR	IF YES, I WOULD LI	YOUR WHATSAPP NUMBER	
41	7/25/2023 15:23:30	dshrabani10@gmail.com	18901920078 - SHRABANI DAS	Yes	APPEAR IN PRACTICE	8972482090	
42	7/25/2023 15:28:33	sagarmandalsm002@gmail.com	18901920093 - SAGAR MANDAL	Yes	APPEAR IN PRACTICE	8001978265	
43	7/25/2023 15:30:35	bibekanandabhuin713@gmail.com	18901920091 - BIBEKANANDA BHUIN	Yes	APPEAR IN PRACTICE	7699443147	
44	7/25/2023 16:24:02	chatterjeetamal205@gmail.com	18901920005 - TAMAL CHATTERJEE	Yes	APPEAR IN PRACTICE	8918626624	
45	7/25/2023 16:36:08	tushardebnath14@gmail.com	18901920008 - TUSHAR DEBNATH	Yes	APPEAR IN PRACTICE	9933602460	
46	7/25/2023 17:37:42	sinchan.roy002@gmail.com	18901920101 - SINCHAN KUMAR ROY	Yes	APPEAR IN PRACTICE	9064090734	
47	7/25/2023 22:39:55	saikatgoswamisintu@gmail.com	18901920011 - SAIKAT GOSWAMI	Yes	APPEAR IN PRACTICE	8116658098	
48	7/25/2023 22:49:15	nandiarpan001@gmail.com	18901921117 - ARPAN NANDI	Yes	BOTH	8167550873	
49							


 Prof. (Dr.) Samir Kumar Samanta
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M. Dhing 21/7/23
 GPAT COORDINATOR





5.1.4

Details of Resource Persons for Competitive Examinations




Prof. (Dr.) Samir Kumar Samanta
M. Pharm., Ph.D (J.U.)
Principal
Dr. B. C. Roy College of Pharmacy & AHS
Durgapur, West Bengal-713206



Details of Resource persons for competitive examinations

Name: Mr.: Shobhan Bose



Designation: Assistant Professor

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences
Durgapur, 713 206, West Bengal.


E mail: shobhanbcroy@gmail.com

Contact No: 9832965302

SHORT BIODATA

1. Academic Background
 - i. B.Pharm-2005, DGPA-8.66
 - ii. M.PHARM (Pharmaceutical Chemistry), DGPA-8.40.
2. Experiences-
 1. 1st August 2007 till date at BCRCP
3. Achievements: Qualified GATE in 2005
4. Publications: 3




Prof. (Dr.) Samir Kumar Samanta
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Name: Dr./Mr./Ms./Mrs. : Sushruta Chakraborty



Designation: **Assistant Professor**

Dr. BC Roy College of Pharmacy and Allied Health Sciences
Durgapur 713 206, West Bengal.

E mail: sushrutachakraborty22@gmail.com

Contact No: 9475372796/7430920990

SHORT BIODATA

1. Academic Background

iii. B.Pharm-2017,DGPA-8.66

iv. M.PHARM (PHARMACOLOGY), DGPA-9.62.

2. Experiences-


2. 17th July 2019-18th January 2021 (SETGOI)

3. 19th January 2021-Present-BCRCP

3. Achievements (Qualified GATE/GPAT and other achievements)-*Gold medalist*, M.Pharm
in Pharmacology, Dr.B.C Roy College of Pharmacy & A.H.S

4. Publications: 1




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Name: Dr./Mr./Ms./Mrs. : Ms Surita Ghosh



Designation: Assistant Professor grade I.

Dr. BC Roy College of Pharmacy and Allied Health Sciences

Durgapur 713 206, West Bengal.

E mail: suritaghosh3@gmail.com

Contact No: 7586808110/ 7797159243

SHORT BIODATA

1. Academic Background


- v. Passed 10th standard examination with 76.5% marks (WBBSE)
- vi. Passed 12th standard examination with 63.6% marks (WBBHSE)
- vii. Passed B Pharm 8.77 (MAKAUT)
- viii. Passed M Pharm in pharmaceuticals with 9.50(MAKAUT)

2. Experiences: 4.6 years

3. Achievements (Qualified GATE/GPAT and other achievements) : Qualified in the year of 2013

4. Publications: V-Smart Nanomedicine: a review on brain targeted drug delivery system (Pharmawave)




Prof. (Dr.) Samir Kumar Samanta
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Principal
Dr. B. C. Roy College of Pharmacy & AHS
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Name: Mr. Sonjoy Konar



Designation : Assistant Professor

Dr. BC Roy College of Pharmacy and Allied Health Sciences

Durgapur 713206, West Bengal.

E mail: sonjoykonar09@gmail.com

Contact No: 9475120119

SHORT BIODATA

1. Academic Background

ix. B.Pharm-2005

x. M.PHARM (PHARMACEUTICAL CHEMISTRY), DGPA-8.62

2. Experiences-

4. Teaching 01/08/2009 to 13/02/2015 (Shri RLT Institute of Pharmaceutical science & Technology, Etawah, U.P.)

5. 14/02/2015 to till date (DR. B. C. Roy College of Pharmacy & AHS)

3. Publications: 5




Prof. (Dr.) Samir Kumar Samanta
M. Pharm., Ph.D (J.U.)
Principal
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Durgapur, West Bengal-713206



Name: Dr. Manabendra Dhua



Asst. Professor (Gr III)

Dr. BC Roy College of Pharmacy and Allied Health Sciences

Durgapur 713 206, West Bengal.

E mail: manabendra.dhua@bcrpc.org / manabendra.dhua@gmail.com

Contact No: 9732113779

SHORT BIODATA

1. Academic Background

- Awarded PhD in Pharmacy from Maulana Abul Kalam Azad University, Kalyani, in the year 2022.
- Passed M. Pharm (Pharmaceutical Chemistry) from BIT, Mesra in the year 2007.

2. **Experiences:** 17 years

3. **Achievements:** Qualified GATE in the year 2005,

4. **Publications:** 5

5. **Others:** Coordinator, GPAT Cell at BCRCP.




Prof. (Dr.) Samir Kumar Samanta
M. Pharm., Ph.D (J.U.)
Principal
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Durgapur, West Bengal-713206



Name: Mrs. Rituparna Chaki



Asst. Professor (Gr III)

Dr. BC Roy College of Pharmacy and Allied Health Sciences
Durgapur 713 206, West Bengal.

E mail: rituparna.chaki@gmail.com, Contact No: 9735890930

SHORT BIODATA

1. Academic Background


- Completed Master of Pharmacy in Industrial Pharmacy from Dept. of Pharmacy, Shri. G.S. Institute of Technology and Sciences in the year 2009.
- Presently pursuing PhD from Jadavpur University.
- Joined Dr. B.C.Roy College of Pharmacy and AHS in the year 2009.
- In charge of NSS unit of the institute and have been active in organizing activities such as blood donation camp, health awareness rally with students, free health check-up program for under-privileged, program with HOPE School, Durgapur working for differently abled children.
- Organizing Induction Program for B.Pharm first year as a coordinator.
- A member of GPAT cell of the institute guiding students for higher studies.
- In charge of Event management committee of the institute.
- Actively involved in the setup of the pharmacy museum of the institute.
- A member of the anti-ragging committee.
- Having more than 15 publications in various peer reviewed journals and books.

2. **Experiences:** More than 15years of teaching

3. **Achievements:** Qualified GATE

4. **Publications:** 15




Prof. (Dr.) Samir Kumar Samanta
M. Pharm., Ph.D (J.U.)
Principal
Dr. B. C. Roy College of Pharmacy & AHS
Durgapur, West Bengal-713206



Dr. B. C. Roy College of Pharmacy

DEPARTMENT

Attendance Register

Sl. No.	UNIVERSITY ROLL NO-NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	REMARKS		
1	18901920005 - TAMAL CHATTERJEE (only test)																																		
2	18901920008 - TUSHAR DEBNATH (only test)																																		
3	18901920010 - SATHI GHOSH																																		
4	18901920022 - RITWIM MONDAL (only test)																																		
5	18901920011 - SAIKAT GOSWAMI (only test)																																		
6	18901920014 - POULAMI SINGHA X																																		
7	18901920015 - MAHIMA CHOUDHURY X																																		
8	18901920038 - NEHA DAS (only test)																																		
9	18901920019 - BILASHI PATRA X																																		
10	18901920070 - AMRITA SINGHA (only test)																																		
11	18901920021 - SHYAMACHARAN BANERJEE																																		
12	18901920029 - BITHIKA BANERJEE																																		
13	18901920031 - ANKITA DEY																																		
14	18901920032 - AGNITH MAITY X																																		
15	18901920075 - SAPTARSHI BHATTACHARJEE (only test)																																		
16	18901920080 - AYUSH SEN (only test)																																		
17	18901920002 - MD TOUHEED AHMED (only test)																																		
18	18901920033 - SAYAN NANDI																																		
19	18901920034 - TAPABRATA BHANJA																																		
20	18901920037 - SUBHANKAR DAS (only test)																																		
21	18901920042 - ARKA GANGULY (only test)																																		
22	18901920035 - ARITRA NANDY																																		
23	18901920040 - SOHAM KUNDU																																		
24	18901920054 - APARESH BERA (only test)																																		
25	18901920043 - ANWESHA BANDYOPADHYAY																																		
26	18901920027 - MOHAN CHANDRA BARAL (only test)																																		
29	18901920045 - RITWIK SAHOO																																		
28	18901920050 - SARBARATHA DAS																																		
29	18901920054 - SUMANA DAS																																		
30	18901920065 - SAYAN HATI																																		
31	18901921111 - DEBJYOTI DEY (only test)																																		

5th year - 2023-24
and Allied Health Sciences, Durgapur
 DEPARTMENT OF PHARMACY, CLASS 2023-24

For the month of August..... 2023

Prof. (Dr.) Sahar Karmar Samanta
 M. Pharm., Ph.D (J.U.)
 Principal
 College of Pharmacy & AHS
 Dr. B. C. Roy College of Pharmacy & AHS, Durgapur, West Bengal-713206



M. Pharm 21/11/24
 GPAT COORDINATOR

Dr. B. C. Roy College of Pharmacy and Allied Health Sciences, Durgapur

5th year - 2023-24

DEPARTMENT Attendance Register



Sl No	NAME	Attendance Register												REMARKS				
		1	2	3	4	5	6	7	8	9	10	11	12					
32	18901920069 - ANTARA GUPTA																	
33	18901920073 - PRITAM JANA																	
34	18901920078 - SHRABANI DAS (only dett)																	
35	18901920083 - SK SAMIM HOSSAIN																	
36	18901920012 - ANKET OJHA (only dett)																	
37	18901920091 - BIBEKANANDA BHUIJ (only dett)																	
38	18901920093 - SAGAR MANDAL (only dett)																	
39	18901920098 - SUBHRAKANTA MANDAL																	
40	18901920098 - MABANITA SEN																	
41	18901920100 - PRITAM DE																	
42	18901920101 - SINCHAN KUMAR ROY (only dett)																	
43	18901921105 - SIDDHANTA MISHRA																	
44	18901921108 - ATANU JANA																	
45	18901921112 - SAYAK MONDAL																	
46	18901921115 - SANDIP REHIDAS																	
47	18901921117 - ARPAN NANDI																	

For the month of 20

14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	12	14	15	16	18												5
	8	9	10	11	12	13											5
	10	11	12	13	14	15											
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	10	11	12	13	14	15											
	10	11	12	13	14	15											
	10	11	12	13	14	15											

N. Shyamal Kumar
G.P.A.T. COORDINATOR



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Dr. B.C. Roy College of Pharmacy and Allied Health Sciences

Test schedule and syllabus

Test	Subject	Topics
GPAT Mock Test 1	Inorganic Pharmaceutical & Medicinal Chemistry	Importance of inorganic compounds in pharmacy and medicine; An outline of methods of preparation, uses, sources of impurities, tests for purity and identity, including limit tests for iron, arsenic, lead, heavy metals, chloride, sulphate and special tests if any, of the following classes of inorganic pharmaceuticals included in Indian Pharmacopoeia:
	Pharmacology	Fundamentals of general pharmacology: Dosage forms and routes of administration, mechanism of action, combined effect of drugs, factors modifying drug action, tolerance and dependence; Pharmacogenetics
	Medicinal Chemistry	Medicinal Chemistry Basic Principles: Physico-chemical and stereoisomeric (Optical, geometrical) aspects of drug molecules and biological action,
	Pharmacognosy	Systematic pharmacognostic study of the followings: Carbohydrates and derived products: agar, guar gum acacia, Honey, Isabagol, pectin, Starch, sterculia and Tragacanth.
	Pharmaceutics	Micromeretics and Powder Rheology:
GPAT Mock Test 2	Physical Chemistry	Behavior of Gases, Kinetic theory of gases, deviation from ideal behavior and explanation.
	Pharmacology	Principles of Basic and Clinical pharmacokinetics, absorption, Distribution, Metabolism and Excretion of drugs
	Medicinal Chemistry	Bioisosterism, Drug-receptor interactions including transduction mechanisms;
	Pharmaceutical Analysis	Different techniques of pharmaceutical analysis. Preliminaries and definitions Fundamentals of volumetric analysis: Acid Base Titrations: Non-aqueous titrations:
	Pharmaceutics	Prescription: Handling of prescription, source of errors in prescription, care required in dispensing procedures including labeling of dispensed products. General dispensing procedures including labeling of dispensed products; Pharmaceutical calculations: Posology, calculation of doses for infants, adults and elderly patients; Enlarging and reducing recipes percentage solutions, alligation, alcohol dilution, proof spirit, isotonic solutions, displacement value etc.
GPAT Mock Test 3	Organic Chemistry	Importance of fundamentals of organic chemistry in pharmaceutical sciences; Structure and Properties: Atomic structure, Atomic orbitals, Molecular orbital theory, wave equation, Molecular orbitals, Bonding and Anti-bonding orbitals, Covalent bond, Hybrid orbitals, Intramolecular forces, Bond dissociation energy, Polarity of bonds, Polarity of molecules, Structure and physical properties, Intermolecular forces, Acids and bases;
	Pharmacology	Adverse Drug Reactions; Bioassay of Drugs and Biological Standardization
	Medicinal Chemistry	Drug metabolism and Concept of Prodrugs;
	Pharmacognosy	Lipids: Bees wax, Castor oil, Cocoa butter, Codliver oil, Hydnocarpus oil, Kokum butter, Lard, Linseed oil, Rice Bran oil, Shark liver oil and Wool fat.
	Pharmaceutics	Liquid Dosages Forms: Introduction, types of additives used in formulations, vehicles, stabilizers, preservatives, suspending agents, emulsifying agents, solubilizers, colors, flavors and others, manufacturing packaging, labeling, evaluation of clear liquids, suspensions and emulsions official in pharmacopoeia;
GPAT Mock Test 4	Biochemistry	The concept of free energy, Determination of change in free energy - from equilibrium constant and reduction potential, bioenergetics, production of ATP and its biological significance;
	Pharmacology	Discovery and development of new drugs, Bioavailability and bioequivalence studies;
	Analysis	Oxidation Reduction Titrations: Precipitation Titrations:
	Pharmaceutics	Principles involved and procedures adopted in dispensing of : Typical prescriptions like mixtures, solutions, emulsions, creams, ointments, powders, capsules, pastes, jellies, suppositories, ophthalmic, pastilles, lozenges, pills, lotions, liniments, inhalations, paints, sprays, tablet triturates, etc. Incompatibilities
GPAT Mock Test 5	Inorganic Pharmaceutical & Medicinal Chemistry	Gastrointestinal Agents: Acidifying agents, Antacids, Protectives and Adsorbents, Cathartics;
	Pharmacology	Pharmacology of Peripheral Nervous System: Neurohumoral transmission

Prof. (Dr.) *[Signature]* Kumar Samanta
M. Pharm. (J.U.)

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		(autonomic and somatic), Parasympathomimetics, Parasympatholytics.
	Medicinal Chemistry	Drugs acting at synaptic and neuro-effector junction sites: Cholinergics, anti-cholinergics and cholinesterase inhibitors
	Pharmacognosy	RESINS: Study of Drugs Containing Resins and Resin Combinations like Colophony, podophyllum, jalap, cannabis, capsicum, myrrh, asafoetida, balsam of Tolu, balsam of Peru, benzoin, turmeric, ginger.
	Pharmaceutics	Fluid Flow: Types of flow, Reynold's number, Viscosity, Concept of boundary layer, basic equations of fluid flow, valves, flow meters, manometers and measurement of flow and pressure. Heat transfer: Concept of heat flow, applications of Fourier's law, forced and natural convection, surface coefficients, boiling liquids, condensing vapors, heat exchangers, heat interchangers, radiation, black body, Stefan Boltzmann equation, Kirchoff's law.
GPAT Mock Test 6	Physical Chemistry	The Liquid State: Physical properties (surface tension, parachor, viscosity, refractive index, dipole moment);
	Pharmacology	Sympathomimetics
	Medicinal Chemistry	Adrenergic drugs,
	Analysis	Gravimetric Analysis: Complexometric titrations:
	Pharmaceutics	Viscosity and Rheology: Newtonian systems, Law of flow, kinematic viscosity, effect of temperature; non-Newtonian systems: pseudoplastic, dilatant, plastic; thixotropy, thixotropy in formulation, negative thixotropy, determination of viscosity, capillary, falling ball, rotational viscometers.
GPAT Mock Test 7	Organic Chemistry	Stereochemistry: Nomenclature, isomerism, stereoisomerism, conformational and configurational isomerism, optical activity, specification of configuration, Reactions involving stereoisomers, chirality, conformations;
	Pharmacology	Adrenergic receptor and neuron blocking agents, Ganglion stimulants and blocking agents
	Pharmacognosy	TANNINS: Study of tannins and tannin containing drugs like Gambier, black catechu, gall and myrobalan.
	Pharmaceutics	Complexation: Classification of complexes, methods of preparation, analysis, & applications. Kinetics and Drug Stability: General considerations & concepts, half-life determination, Influence of temperature, light, solvent, catalytic species and other factors, Accelerated stability study, expiration dating.
GPAT Mock Test 8	Biochemistry	Enzymes: Nomenclature, enzyme kinetics and their mechanism of action, mechanism of inhibition, enzymes and iso-enzymes in clinical diagnosis.
	Pharmacology	Neuromuscular blocking Agents, Local anesthetic Agents.
	Medicinal Chemistry	Local Anesthetics, Neuromuscular blocking agents.
	Pharmaceutics	Semisolid Dosage Forms: Definitions, types, mechanisms of drug penetration, factors influencing penetration, semisolid bases and their selection. General formulation of semisolids, clear gels manufacturing procedure, evaluation and packaging; Suppositories: Ideal requirements, bases, displacement value, manufacturing procedure, packaging and evaluation;
GPAT Mock Test 9	Inorganic Pharmaceutical & Medicinal Chemistry	Major Intra- and Extra-cellular Electrolytes: Physiological ions. Electrolytes used for replacement therapy, acid-base balance and combination therapy;
	Pharmacology	Pharmacology of Central Nervous System: Neurohumoral transmission in the C.N.S., General Anesthetics, Alcohols and disulfiram, Sedatives, Hypnotics, Anti-anxiety agents and Centrally acting muscle relaxants
	Medicinal Chemistry	General Anesthetics, Hypnotics and Sedatives, Anxiolytics
	Pharmacognosy	VOLATILE OILS: General methods of obtaining volatile oils from plants, Study of volatile oils of Mentha, Coriander, Cinnamon, Cassia, Lemon peel, Orange peel, Lemon grass,
	Pharmaceutics	Importance of microbiology in pharmacy Structure of bacterial cell; Classification of microbes and their taxonomy: Actinomycetes, bacteria, rickettsiae, spirochetes and viruses. Identification of Microbes: Stains and types of staining techniques, electron microscopy; Nutrition, cultivation, isolation of

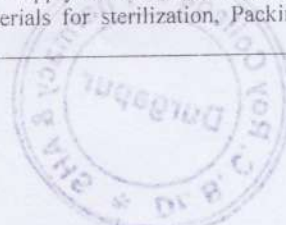
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		bacteria, actinomycetes, fungi, viruses, etc; microbial genetics and variation.
GPAT Mock Test 10	Physical Chemistry	Solutions: Ideal and real solutions, solutions of gases in liquids, colligative properties, partition coefficient, conductance and its measurement, Debye Huckel theory;
	Pharmacology	Psychopharmacological agents (anti-psychotics), anti-manics, and hallucinogens, Antidepressants
	Medicinal Chemistry	Psychopharmacological agents (Neuroleptics, Anti-depressants,
	Analysis	Miscellaneous Methods of Analysis: Diazotization titrations, Kjeldahl method of nitrogen estimation, Karl-Fischer aquametry, Oxygen flask combustion method, Gasometry.
	Pharmaceutics	Surface and Interfacial Phenomenon: Liquid interface, surface and interfacial tensions, surface free energy, measurement of surface and interfacial tensions, spreading coefficient, adsorption at liquid interfaces, surface active agents, HLB classification, solubilization, detergency, adsorption at solid interfaces, solid-gas and solid-liquid interfaces, complex films, electrical properties of interface.
GPAT Mock Test 11	Organic Chemistry	Stereoselective and stereospecific reactions; Structure, Nomenclature, Preparation and Reactions of: Alkanes, Alkenes, Alkynes, Cyclic analogs, Dienes, Benzene, Polynuclear aromatic compounds,
	Pharmacology	Anti-epileptics drugs, Anti-Parkinsonian drugs, Analgesics, Antipyretics, non-steroidal anti-inflammatory and anti-gout agents.
	Medicinal Chemistry	Anticonvulsants, Anti-Parkinsonian drugs, Opioid analgesics, Analgesic-antipyretics, Anti-inflammatory (non-steroidal) agents.
	Pharmacognosy	VOLATILE OILS: General methods of obtaining volatile oils from plants, Study of volatile oils of Citronella, Caraway, Dill, Spearmint, Clove, Fennel, Nutmeg, Eucalyptus, Chenopodium, Cardamom, Valerian, Musk, Palmarosa, Gaultheria, Sandal wood;
	Pharmaceutics	Evaporation: Basic concept of phase equilibria, factor affecting evaporation, evaporators, film evaporators, single effect and multiple effect evaporators, Mathematical problems on evaporation. Distillation: Roult's law, phase diagrams, volatility; simple steam and flash distillations, principles of rectification, Mc-Cabe Thiele method for calculations of number of theoretical plates, Azeotropic and extractive distillation.
GPAT Mock Test 12	Biochemistry	Co-enzymes: Vitamins as co-enzymes and their significance. Metals as cofactors and their significance; Carbohydrate Metabolism: Conversion of polysaccharides to glucose-1-phosphate, Glycolysis, fermentation and their regulation, Gluconeogenesis and glycogenolysis, Metabolism of galactose and galactosemia, Role of sugar nucleotides in biosynthesis, and Pentose phosphate pathway;
	Pharmacology	Narcotic analgesics and antagonists, C.N.S. stimulants, Drug Addiction and Drug Abuse.
	Medicinal Chemistry	Opioid analgesics, CNS stimulants.
	Analysis	Coulometry: Polarography:
	Pharmaceutics	Blood Products and Plasma Substitutes: Collection, processing and storage of whole human blood, concentrated human RBCs, dried human plasma, human fibrinogen, human thrombin, human normal immunoglobulin, human fibrin, foam plasma substitutes, -ideal requirements, PVP, dextran Etc. for control of blood pressure as per I.P.;
GPAT Mock Test 13	Inorganic Pharmaceutical & Medicinal Chemistry	Essential and Trace Elements: Transition elements and their compounds of pharmaceutical importance, Iron and haematinics, mineral supplements; Cationic and anionic components of inorganic drugs useful for systemic effects;
	Pharmacology	Pharmacology of Cardiovascular System: Drugs used in the management of congestive cardiac failure, Antihypertensive drugs, Anti-anginal and Vasodilator drugs, including calcium channel blockers and beta adrenergic antagonists
	Medicinal Chemistry	Anti-hypertensives, anti-anginal agents, Cardiotonics,
	Pharmacognosy	FIBERS: Study of fibers used in pharmacy such as cotton, silk, wool, nylon, glass-wool, polyester and asbestos.
	Pharmaceutics	Central Sterile Supply Unit and their Management: Types of materials for sterilization, Packing of materials prior to sterilization, sterilization


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		equipments, Supply of sterile materials.
GPAT Mock Test 14	Physical Chemistry	Thermodynamics: First, Second and Third laws, Zeroth law, Concept of free energy, enthalpy and entropy, absolute temperature scale;
	Pharmacology	Anti-arrhythmic drugs, Anti-hyperlipedemic drugs, Drugs used in the therapy of shock
	Medicinal Chemistry	Anti-arrythmic agents, Anti-hyperlipedemic agents,
	Analysis	Amperometry:Chromatography: Theory of chromatography, plate theory, Factors affecting resolution, van Deemter equation.
	Pharmaceutics	Manufacture of Sterile and Non-sterile Products: Policy making of manufacturable items, demand and costing, personnel requirements, manufacturing practice, Master formula Card, production control, Manufacturing records.
GPAT Mock Test 15	Organic Chemistry	Arenes, Alkyl halides, Alcohols, Ethers, Epoxides, Amines,
	Pharmacology	Drugs Acting on the Hemopoietic System: Hematinics, Anticoagulants, Vitamin K and hemostatic agents
	Medicinal Chemistry	Anticoagulants
	Pharmacognosy	Saponins : Liquorice, ginseng, dioscorea, sarsaparilla, and senega. 20 Cardioactive glycosides: Digitalis, squill, strophanthus and thevetia,
	Pharmaceutics	Drug Information Services: Sources' of Information on drugs, disease, treatment schedules, procurement of information, Computerized services (e.g., MEDLINE), Retrieval of information, Medication error- types of medication errors, correction and reporting.
GPAT Mock Test 16	Biochemistry	The Citric Acid Cycle: Significance, reactions and energetics of the cycle, Amphibolic role of the cycle, and Glyoxalic acid cycle;
	Pharmacology	Fibrinolytic and anti-platelet drugs, Blood and plasma volume expanders.
	Medicinal Chemistry	Anti-platelet drugs.
	Analysis	TLC, Paper chromatography, GLC
	Pharmaceutics	Records and Reports: Prescription filling, drug profile, patient medication profile, cases on drug interaction and adverse reactions, idiosyncratic cases. Pharmacoeconomics: Introduction to pharmacoeconomics, different methods of pharmacoeconomics, application of pharmacoeconomics. Pharmacoepidemiology: Definition and scope, method to conduct pharmacoepidemiological studies, advantages & disadvantages of pharmacoepidemiological studies.
GPAT Mock Test 17	Inorganic Pharmaceutical & Medicinal Chemistry	Topical Agents: Protectives, Astringents and Anti-infectives. Gases and Vapors: Oxygen, Anesthetics (inorganic) and Respiratory stimulants;
	Pharmacology	Drugs acting on urinary system: Fluid and electrolyte balance, Diuretics
	Medicinal Chemistry	Diuretics
	Pharmacognosy	Anthraquinone cathartics: Aloe, senna, rhubarb and cascara, Others: Psoralea, gentian, saffron, chirata, quassia.
	Pharmaceutics	Nuclear Pharmacy: Methods of handling radioisotopes, radioisotope committee.
GPAT Mock Test 18	Physical Chemistry	Thermochemical equations; Phase rule; Adsorption: Freudlich and Gibbs adsorption, isotherms, Langmuir's theory of adsorption.
	Pharmacology	Autacoids: Histamine, Antihistaminic drugs, 5-HT- its agonists and antagonists, Prostaglandins, thromboxanes and leukotrienes, Angiotensin, Bradykinin and Substance P and other vasoactive peptides,
	Medicinal Chemistry	Antihistamines, Eicosanoids,
	Analysis	Column chromatography, HPLC,HPTLC
	Pharmaceutics	Introduction to biopharmaceutics: Passage of drugs across biological barrier (passive diffusion, active transport, facilitated diffusion, ion-pair formation and pinocytosis); Factors influencing absorption- biological, physico-chemical, physiological and pharmaceutical; Drug distribution in the body, plasma protein binding.
GPAT Mock Test 19	Organic Chemistry	Phenols, Aldehydes and ketones, Carboxylic acids, Functional derivatives of carboxylic acids
	Pharmacognosy	Alkaloids: Pteridine: piperidine: Tobacco, areca and lobelia. Tropane: Belladonna, hyoscyamus, datura, duboisia, coca and withania.

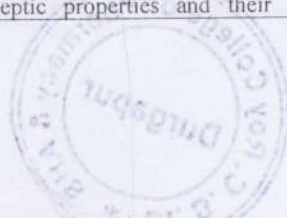
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	Pharmaceutics	Pharmacokinetics: Significance of plasma drug concentration measurement. Compartment model- Definition and Scope. Pharmacokinetics of drug absorption - Zero order and first order absorption rate constant using Wagner-Nelson and residual methods. Volume of distribution and distribution coefficient. Compartment kinetics- One compartment and two compartment models. Determination of pharmacokinetic parameters from plasma and urine data after drug administration by intravascular and oral route. Clearance concept, mechanism of renal clearance, clearance ratio, determination of renal clearance. Extraction ratio, hepatic clearance, biliary excretion, extrahepatic circulation. Non-linear pharmacokinetics with special reference to one compartment model after I.V. drug administration.
GPAT Mock Test 20	Biochemistry	Lipids Metabolism : Oxidation of fatty acids, β -oxidation & energetics, biosynthesis of ketone bodies and their utilization, biosynthesis of saturated and unsaturated fatty acids, Control of lipid metabolism, Essential fatty acids & eicosanoids (prostaglandins, thromboxanes and leukotrienes), phospholipids, and sphingolipids, Biosynthesis of eicosanoids, cholesterol, androgens, progesterone, estrogens corticosteroids and bile acids.
	Pharmacology	Drugs Acting on the Respiratory System: Anti-asthmatic drugs including bronchodilators, Anti-tussives and expectorants, Respiratory stimulants.
	Medicinal Chemistry	Anti-tussives,
	Analysis	Ultraviolet and visible spectrophotometry,
	Pharmaceutics	Clinical Pharmacokinetics: Definition and scope: Dosage adjustment in patients with and without renal and hepatic failure; Design of single dose bio-equivalence study and relevant statistics, Pharmacokinetic drug interactions and their significance in combination therapy.
GPAT Mock Test 21	Inorganic Pharmaceutical & Medicinal Chemistry	Dental Products: Dentifrices, Anti-caries agents; Complexing and chelating agents used in therapy;
	Pharmacology	Drugs acting on the Gastrointestinal Tract: Antacids, Anti-secretory and Anti-ulcer drugs, Laxatives and anti-diarrhoeal drugs, Appetite Stimulants and Suppressants
	Medicinal Chemistry	Antispasmodic and anti-ulcer drugs,
	Pharmacognosy	Quinoline and Isoquinoline: Cinchona, ipecac, opium. Indole: Ergot, rauwolfia, catharanthus, nux-vomica and physostigma.
	Pharmaceutics	Bioavailability and bioequivalence: Measures of bioavailability, C_{max} , t_{max} , K_{el} and Area Under the Curve (AUC); Design of single dose bioequivalence study and relevant statistics; Review of regulatory requirements for conducting bioequivalent studies. Biopharmaceutical Classification System (BCS) of drugs.
GPAT Mock Test 22	Physical Chemistry	Photochemistry: Consequences of light absorption, Jabolenski diagram, Quantum efficiency;
	Pharmacology	Emetics and anti-emetics, Miscellaneous: Carminatives, demulcents, protectives, adsorbents, astringents, digestants, enzymes and mucolytics
	Analysis	IR spectroscopy
	Pharmaceutics	Performance evaluation methods: In-vitro dissolution studies for solid dosage forms methods, interpretation of dissolution data. Bioavailability studies and bioavailability testing protocol and procedures. In vivo methods of evaluation and statistical treatment. GMP and quality assurance, Quality audit. Design, development, production and evaluation of controlled/sustained/extended release formulations.
GPAT Mock Test 23	Organic Chemistry	α, β -Unsaturated carbonyl compounds, Reactive intermediates- carbocations, carbanions, carbenes and nitrenes;
	Pharmacology	Pharmacology of Endocrine System: Hypothalamic and pituitary hormones, Thyroid hormones and anti-thyroid drugs, parathormone, calcitonin and Vitamin D, Insulin, glucagons, incretins, oral hypoglycemic agents and insulin analogs
	Medicinal Chemistry	Thyroid and Anti thyroid drugs; Insulin and oral hypoglycemic agents:
	Pharmacognosy	Imidazole: Pilocarpus. Steroidal: Veratrum and kurchi. Alkaloidal Amine: Ephedra and colchicum. Glycoalkaloid: Solanum.
	Pharmaceutics	Designing of dosage forms: Pre-formulation studies, Study of physical properties of drug like physical form, particle size, shape, density, wetting, dielectric constant. Solubility, dissolution and organoleptic properties and their effect on formulation, stability and

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		bioavailability. Study of chemical properties of drugs like hydrolysis, oxidation, reduction, racemization, polymerization etc., and their influence on formulation and stability of products. Study of pro-drugs in solving problems related to stability, bioavailability and elegance of formulations. Design, development and process validation methods for pharmaceutical operations involved in the production of pharmaceutical products with special reference to tablets, suspensions. Stabilization and stability testing protocol for various pharmaceutical products. ICH Guidelines for stability testing of formulations.
GPAT Mock Test 24	Biochemistry	Biological Oxidation: Redox-potential, enzymes and co-enzymes involved in oxidation reduction & its control, The respiratory chain, its role in energy capture and its control, energetics of oxidative phosphorylation. Inhibitors of respiratory chain and oxidative phosphorylation, Mechanism of oxidative phosphorylation.
	Pharmacology	ACTH and corticosteroids, Androgens and anabolic steroids, Estrogens, progesterone and oral contraceptives, Drugs acting on the uterus
	Medicinal Chemistry	Steroidal Drugs: Steroidal nomenclature (IUPAC) and stereochemistry, Androgens and anabolic agents, Estrogens and Progestational agents, Oral contraceptives, Adrenocorticoids;
	Analysis	Mass spectrometry
	Pharmaceutics	Surgical products: Definition, primary wound dressing, absorbents, surgical cotton, surgical gauzes etc., bandages, adhesive tape, protective cellulosic hemostatics, official dressings, absorbable and non-absorbable sutures, ligatures and catguts. Packaging of Pharmaceutical Products: Packaging components, types, specifications and methods of evaluation, stability aspects of packaging. Packaging equipments, factors influence choice of containers, legal and official requirements for containers, package testing.
GPAT Mock Test 25	Inorganic Pharmaceutical & Medicinal Chemistry	Miscellaneous Agents: Sclerosing agents, Expectorants, Emetics, Inorganic poisons and antidotes.
	Pharmacology	Chemotherapy: General Principles of Chemotherapy, Bacterial resistance; Sulfonamides and cotrimoxazole, Antibiotics- Penicillins, Cephalosporins
	Medicinal Chemistry	Antibiotics: β -Lactam
	Pharmacognosy	Purines: Coffee, tea and cola. Biological sources, preparation, identification tests and uses of the following enzymes: Diastase, papain, pepsin, trypsin, pancreatin.
	Pharmaceutics	Parenteral Products: Pre-formulation factors, routes of administration, water for injection, and sterile water for injection, pyrogenicity, non-aqueous vehicles, isotonicity and methods of its adjustment, Formulation details, Containers and closures and selection, labeling; Pre-filling treatment, washing of containers and closures, preparation of solution and suspensions, filling and closing of ampoules, vials, infusion fluids, lyophilization & preparation of sterile powders, equipment for large scale manufacture and evaluation of parenteral products; Aseptic Techniques-source of contamination and methods of prevention, Design of aseptic area, Laminar flow bench services and maintenance. Sterility testing of pharmaceuticals.
GPAT Mock Test 26	Physical Chemistry	Chemical Kinetics: Zero, First and Second order reactions, complex reactions, theories of reaction kinetics, characteristics of homogeneous and heterogeneous catalysis, acid base and enzyme catalysis;
	Pharmacology	Aminoglycosides, Chloramphenicol, Macrolides, Tetracyclines, Quinolones, fluoroquinolones and Miscellaneous antibiotics;
	Medicinal Chemistry	macrolides, tetracyclines, aminoglycosides, polypeptide antibiotics, fluoroquinolones.
	Analysis	NMR
	Pharmaceutics	Dehumidification and Humidity Control: Basic concepts and definition, wet bulb and adiabatic saturation temperatures, Hygrometric chart and measurement of humidity, application of humidity measurement in pharmacy, equipments for dehumidification operations; Refrigeration and Air Conditioning: Principle and applications of refrigeration and air conditioning;
GPAT Mock	Organic Chemistry	Nucleophilic and Electrophilic Aromatic Substitution Reactions: Reactivity and Orientation;

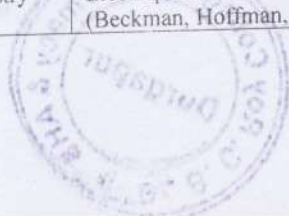
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Test 27	Pharmacology	Chemotherapy of tuberculosis, leprosy, fungal diseases, viral diseases, HIV and AIDS
	Medicinal Chemistry	Chemotherapeutic Agents used in bacterial, fungal, viral, protozoal, parasitic and other infections.
	Pharmacognosy	Amla, Kantkari, Satavari, Tylophora, Bhilawa, Kalijiri, Bach, Rasna,
	Pharmaceutics	Antibiotics: Historical development of antibiotics. Antimicrobial spectrum and methods used for their standardization. Screening of soil for organisms producing antibiotics, fermenter, its design, control of different parameters. Isolation of mutants, factors influencing rate of mutation. Design of fermentation process. Isolation of fermentation products with special reference to penicillins, streptomycins, tetracyclines and vitamin B12.
GPAT Mock Test 28	Biochemistry	Metabolism of ammonia and nitrogen containing monomers: Nitrogen balance, Biosynthesis of amino acids, Catabolism of amino acids, Conversion of amino acids to specialized products, Assimilation of ammonia, Urea cycle, metabolic disorders of urea cycle, Metabolism of sulphur containing amino acids.
	Pharmacology	urinary tract infections and sexually transmitted diseases, malaria, amoebiasis and other protozoal infections
	Medicinal Chemistry	protozoal, parasitic and other infections,
	Analysis	Fluorimetry, Flame photometry
GPAT Mock Test 29	Pharmaceutics	Crystallization: Characteristics of crystals like-purity, size, shape, geometry, habit, forms size and factors affecting them, Solubility curves and calculation of yields. Material and heat balances around Swenson Walker Crystallizer. Supersaturation, theory and its limitations, Nucleation mechanisms, crystal growth. Study of various types of Crystallizers, tanks, agitated batch, Swenson Walker,
	Inorganic Pharmaceutical & Medicinal Chemistry	Pharmaceutical Aids Used in Pharmaceutical Industry: Anti-oxidants, Preservatives, Filter aids, Adsorbents, Diluents, Excipients, Suspending agents, Colorants;
	Pharmacology	Anthelmintics. Chemotherapy of malignancy and immunosuppressive agents.
	Medicinal Chemistry	protozoal, parasitic and other infections, Anti-metabolites (including sulfonamides); Anti-neoplastic agents; Anti-viral agents (including anti-HIV); Immunosuppressives and immunostimulants;
	Pharmacognosy	Punamava, Chitrack, Apamarg, Gokhru, Shankhapushpi, Brahmi, Adusa, Atjuna, Ashoka,
GPAT Mock Test 30	Pharmaceutics	Capsules: Advantages and disadvantages of capsule dosage form, material for production of hard gelatin capsules, size of capsules, formulation, method of capsule filling, soft gelatin, capsule shell and capsule content, importance of base absorption and minimum/gm factors in soft capsules, quality control, stability testing and storage of capsule dosage forms. Micro-encapsulation: Types of microcapsules, importance of microencapsulation in pharmacy, microencapsulation by phase separation, coacervation, multi-orifice, spray drying, spray congealing, polymerization complex emulsion, air suspension technique, coating pan and other techniques, evaluation of micro capsules.
	Physical Chemistry	Quantum Mechanics : Postulates of quantum mechanics, operators in quantum mechanics, the Schrodinger wave equation.
	Pharmacology	Principles of Toxicology: Definition of poison, general principles of treatment of poisoning with particular reference to barbiturates, opioids, organophosphorous and atropine poisoning, Heavy metals and heavy metal antagonists.
	Medicinal Chemistry	Microbial Transformations: Introduction, types of reactions mediated by micro-organisms, design of biotransformation processes, selection of organisms, biotransformation process and its improvements with special reference to steroids
	Analysis	Atomic Absorption Spectroscopy, X-ray Diffraction Analysis, Radioimmunoassay.
GPAT Mock Test 31	Pharmaceutics	Mixing: Theory of mixing, solid-solid, solid-liquid and liquid-liquid mixing equipments. Filtration and Centrifugation: Theory of filtration, continuous and batch filters, filter aids, filter media, industrial filters including filter press, rotary filter, edge filter, Etc. Factors affecting filtration, filtration, optimum cleaning cycle in batch filters. Principles of centrifugation, industrial centrifugal filters, and centrifugal sedimenters.
	Organic Chemistry	Electrophilic and Nucleophilic Addition Reactions; Rearrangements (Beckman, Hoffman, Benzilic acid, pinacole-pinacolone and Bayer-Villager).

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Test 31	Pharmacology	Basic Concepts of Pharmacotherapy: Clinical Pharmacokinetics and individualization of Drug therapy, Drug delivery systems and their Biopharmaceutics & Therapeutic considerations, Drugs used during infancy and in the elderly 18 persons (Pediatrics & Geriatrics), Drugs used during pregnancy, Drug induced diseases, The basics of drug interactions, General principles of clinical toxicology, Common clinical laboratory tests and their interpretation. Important Disorders of Organs, Systems and their Management: Cardio-vascular disorders- Hypertension, Congestive heart failure, Angina, Acute myocardial infarction, Cardiac arrhythmias
	Medicinal Chemistry	Enzyme Immobilization: Techniques of immobilization, factors affecting enzyme kinetics,
	Pharmacognosy	Methi, Lahsun, Palash, Guggal, Gymnema, Shilajit, Nagarmotha and Neem.
	Pharmaceutics	Cosmeticology and Cosmetic Preparations: Fundamentals of cosmetic science, structure and functions of skin and hair. Formulation, preparation and packaging of cosmetics for skin, hair, dentifrice and manicure preparations like nail polish, nail polish remover, Lipsticks, eye lashes, baby care products Etc.
GPAT Mock Test 32	Biochemistry	Purine biosynthesis: Purine nucleotide inter-conversions. Pyrimidine biosynthesis and formation of deoxyribonucleotides.
	Pharmacology	CNS Disorders: Epilepsy, Parkinsonism, Schizophrenia, Depression. Respiratory disease- Asthma. Gastrointestinal Disorders- Peptic ulcer, Ulcerative colitis, Hepatitis, Cirrhosis.
	Medicinal Chemistry	Study of enzymes such as hyaluronidase, penicillinase, streptokinase, amylases and proteases, Immobilization of bacteria and plant cells.
	Analysis	Quality assurance: GLP, ISO 9000, TQM, Quality Review and Quality documentation, Regulatory control, regulatory drug analysis, interpretation of analytical data, Validation, quality audit: quality of equipment, validation of equipment, validation of analytical procedures.
	Pharmaceutics	Ophthalmic Preparations: Requirements, formulation, methods of preparation, labeling, containers, evaluation;
GPAT Mock Test 33	Inorganic Pharmaceutical & Medicinal Chemistry	Acids, Bases and Buffers: Buffer equations and buffer capacity in general, buffers in pharmaceutical systems, preparation, stability, buffered isotonic solutions, measurements of tonicity, calculations and methods of adjusting isotonicity.
	Pharmacology	Endocrine Disorders- Diabetes mellitus and Thyroid disorders. Infectious Diseases- Tuberculosis, Urinary tract infections, Enteric infections, Upper respiratory infections. Hematopoietic Disorders- Anemias
	Medicinal Chemistry	Principles of Drug Design (Theoretical Aspects): Traditional analog and mechanism based approaches, QSAR approaches
	Pharmacognosy	Biogenesis
	Pharmaceutics	Immunology and Immunological Preparations: Principles, antigens and heptans, immune system, cellular/humoral immunity, immunological tolerance, antigen-antibody reactions and their applications. Hypersensitivity, active and passive immunization. Vaccines and sera: their preparation, standardization and storage. Genetic Recombination: Transformation, conjugation, transduction, protoplast fusion and gene cloning and their applications. Development of hybridoma for monoclonal antibodies. Study of drugs produced by biotechnology such as Activase, Humulin, Humatrope, HB etc.
GPAT Mock Test 34	Pharmacology	Joint and Connective tissue disorders- Rheumatic diseases, Gout and Hyperuricemia. Neoplastic Diseases- Acute Leukaemias, Hodgkin's disease. Therapeutic Drug Monitoring, Concept of Essential Drugs and Rational Drug use
	Medicinal Chemistry	Applications of quantum mechanics, Computer Aided Drug Designing (CADD) and molecular modeling.
	Pharmacognosy	Plant tissue culture and marine pharmacognosy
	Pharmaceutics	A brief study of the following Acts with special reference to the main provisions and the latest amendments: Poisons Act 1919; Drugs and Magic Remedies (Objectionable Advertisements) Act 1954; Medical Termination of Pregnancy Act 1970 & Rules 1975; Prevention of Cruelty to Animals Act 1960; States Shops & Establishments Act & Rules; Insecticides Act 1968; AICTE Act 1987; Factories Act 1948; Minimum Wages Act 1948; Patents Act 1970. A brief study of the various Prescription/Non-prescription Products.


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		<p>large-scale by various techniques, different types of tablet compression machinery and the equipments employed, evaluation of tablets. Coating of Tablets: Types of coating, film forming materials, formulation of coating solution, equipments for coating, coating process, evaluation of coated tablets. Stability kinetics and quality assurance.</p> <p>Drug Store Management and Inventory Control: Organization of drug store, Types of materials stocked, storage conditions; Purchase and Inventory Control principles, purchase procedures, Purchase order, Procurement and stocking.</p>
GPAT Mock Test 40	Biochemistry	<p>Mutation: Physical & chemical mutagenesis/carcinogenesis, DNA repair mechanism. Biosynthesis of RNA; Genetic Code and Protein Synthesis: Genetic code, Components of protein synthesis and Inhibition of protein synthesis.</p>
	Pharmacology	<p>hepatic disorders, tuberculosis, urinary tract infections and sexually transmitted diseases. Wherever applicable the molecular basis should be discussed.</p>
	Pharmaceutics	<p>Dispersion Systems: Colloidal dispersions: Definition, types, properties of colloids, protective colloids, applications of colloids in pharmacy; Suspensions and Emulsions: Interfacial properties of suspended particles, settling in suspensions, theory of sedimentation, effect of Brownian motion, sedimentation of flocculated particles, sedimentation parameters, wetting of particles, controlled flocculation, flocculation in structured vehicles, rheological considerations; Emulsions-types, theories, physical stability. Drug distribution Systems in Hospitals: Out-patient dispensing, methods adopted; Dispensing of drugs to in-patients. Types of drug distribution systems. Charging policy, labeling; Dispensing of drugs to ambulatory patients; Dispensing of controlled drugs, Dispensing of ancillary supplies.</p>
GPAT Mock Test 41-50	All subject	Whole syllabus


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M. Dey 21/11/24
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GPAT Mock Test 35	Organic Chemistry	Medical/Surgical accessories, diagnostic aids, appliances available in the market. Elimination reactions; Conservation of Orbital Symmetry and Rules: Electrocyclic, Cycloaddition and Sigmatropic reactions;
	Pharmacology	Pathophysiology of common diseases; Basic Principles of Cell Injury and Adaptations: Causes of Cellular injury, pathogenesis, morphology of cell injury, adaptations and cell death
	Pharmaceutics	Drying: Moisture content and mechanism of drying, rate of drying and time of drying calculations; classification and types of dryers, dryers used in pharmaceutical industries and special drying methods. Size Reduction: Definition, objectives of size reduction, mechanisms of size reduction, factors affecting size reduction, laws governing energy and power requirements of a mills including ball mill, hammer mill, fluid energy mill. Size separation: Different techniques of size separation, sieves, sieve shakers, sedimentation tank, cyclone separators, bag fillers Etc.
GPAT Mock Test 36	Biochemistry	Biosynthesis of Nucleic Acids: Brief introduction of genetic organization of the mammalian genome, alteration and rearrangements of genetic material, Biosynthesis of DNA and its replications.
	Pharmacology	Basic Mechanisms involved in the process of inflammation and repair: Vascular and cellular events of acute inflammation, chemical mediators of inflammation, pathogenesis of chronic inflammation, brief outline of the process of repair.
	Pharmaceutics	Pharmaceutical Aerosols: Definition, propellants, general formulation, manufacturing' and packaging methods, pharmaceutical applications; Community Pharmacy: Organization and structure of retail and whole sale drug store-types of drug store and design, legal requirements for establishment, maintenance and drug store-dispensing of proprietary products, maintenance of records of retail and wholesale, patient counseling, role of pharmacist in community health care and education (First aid, communicable diseases, nutrition, family planning).
GPAT Mock Test 37	Inorganic Pharmaceutical & Medicinal Chemistry	Inorganic Radiopharmaceuticals: Nuclear reaction, radioisotopes, radiopharmaceuticals, Nomenclature, Methods of obtaining their standards and units of activity, half-life, measurement of activity, clinical applications, dosage, hazards and precautions.
	Pharmacology	Immunopathophysiology: T and B cells, MHC proteins, antigen presenting cells, immune tolerance, pathogenesis of hypersensitivity reactions, autoimmune diseases, AIDS, Amyloidosis.
	Pharmaceutics	An elaborate study of the followings: Pharmaceutical Ethics; Pharmacy Act 1948; Drugs and Cosmetics Act 1940 and Rules 1945; Medicinal & Toilet Preparations (Excise Duties) Act 1955; Narcotic Drugs & Psychotropic Substances Act 1985 & Rules; Drugs Price Control Order. Organization and Structure of hospital pharmacy: Organization of a hospital and hospital pharmacy, Responsibilities of a hospital pharmacist, Pharmacy and therapeutic committee, Budget preparation and Implementation.
GPAT Mock Test 38	Pharmacology	Pathophysiology of Common Diseases: Asthma, diabetes, rheumatoid arthritis, gout, ulcerative colitis, neoplasia, psychosis, depression, mania, epilepsy
	Pharmaceutics	Control of microbes by physical and chemical methods: Disinfection, factors influencing disinfectants, dynamics of disinfection, disinfectants and antiseptics and their evaluation;. Sterilization: Different methods, validation of sterilization methods & equipments; Sterility testing of all pharmaceutical products. Microbial assays of antibiotics, vitamins & amino acids. Hospital Formulary: Contents, preparation and revision of hospital formulary.
GPAT Mock Test 39	Organic Chemistry	Neighboring group effects; Catalysis by transition metal complexes; Heterocyclic Compounds: Nomenclature, preparation, properties and reactions of 3, 4, 5, 6 & 7-membered heterocycles with one or two heteroatoms like O, N, S. Chemistry of lipids, Carbohydrates and Proteins.
	Pharmacology	acute and chronic renal failure, hypertension, angina, congestive heart failure, atherosclerosis, myocardial infarction, congestive heart failure, peptic ulcer, anemias
	Pharmaceutics	Tablets: Advantages and disadvantages of tablets, Application of different types of tablets, Formulation of different types of tablets, granulation, technology on

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GPAT Cell, BCRCP

Mock Test-2


Total Time: 1 hour

- Which of the following statements is not true?
 - Lipid insoluble drugs have low Vd
 - Drugs strongly bound to plasma proteins have low Vd
 - Digoxin, Propranolol and Morphine have high Vd
 - Drugs with high Vd can be easily removed by hemodialysis
- All the following statements are true, except:
 - Achlorhydria decreases aspirin absorption by favoring its ionization
 - In liver disease, plasma protein binding will be reduced
 - In kidney disease, excretion of Streptomycin and Digoxin will decrease
 - In liver cirrhosis, prodrugs will be activated faster
- All of the drugs are strongly bound to albumin, except:
 - Barbiturates
 - Tetracycline
 - Warfarin
 - Lidocaine
- Which of the following drugs ionize more at acidic pH:
 - Sodium phenobarbitone
 - Sod. Sulfadiazine
 - Pot. Penicillin V
 - Chloroquine
- Cimetidine potentiates the action of Warfarin, Propranolol and Phenytoin because:
 - It causes deficiency of Glucose-6-Phosphatedehydrogenase
 - It blocks histaminic H₂ receptors
 - It is an inhibitor of microsomal P-450 isoenzymes
 - All of these
- Which of the following statements is false?
 - Basic drugs attain higher concentration intracellularly
 - Acidic drugs ionize more in alkaline urine
 - Ion trapping may contribute to mucosal damage by aspirin
 - Basic drugs ionize more in alkaline urine
- Which of the following drugs first undergoes Phase-II and then Phase-I reaction:
 - Warfarin
 - Isoniazid
 - Chlorpromazine
 - Allopurinol



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8. The metabolism kinetics changes from first order to zero order with increase in dose for one of the following drugs:
 - a. Phenytoin
 - b. Tolbutamide
 - c. Theophylline
 - d. All of these 4
9. Which of the following statements is not true about Glucuronide conjugation:
 - a. it is carried out by UDP-glucuronyltransferase enzyme
 - b. compounds with hydroxyl or carboxylic groups are easily conjugated with glucuronic acid
 - c. drug glucuronides excreted in bile can be hydrolysed by bacteria in g.i.t.
 - d. glucuronidation decreases the hydrophilicity of the drug
10. Which of the following is not a prodrug:
 - a. Malathion
 - b. Prontosil
 - c. Cyclophosphamide
 - d. Heroin
11. Which is the most prominent CYP isoform present in humans:
 - a. CYP3A4
 - b. CYP3A6
 - c. CYP3A5
 - d. CYP3A7
12. Which of the following drugs undergo enterohepatic circulation:
 - a. Morphine
 - b. Phenolphthalein
 - c. Estradiol
 - d. All of these
13. In case of Zero order (linear kinetics), which of the following statements is true:
 - a. Rate of elimination is directly proportional to drug concentration, Cl remains constant.
 - b. Rate of elimination remains constant irrespective of drug concentration, Cl decreases with increase in concentration.
 - c. Both of these
 - d. None of these
14. Which of the following drugs is excreted unchanged exclusively in bile:
 - a. Vecuronium
 - b. Morphine
 - c. Ethacrynic acid
 - d. All of these
15. What type of conjugation reaction do Morphine, Acetaminophen, Diazepam and Chloramphenicol undergo?
 - a. Glucuronide conjugation
 - b. Glutathione conjugation
 - c. Acetylation




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- d. Sulfate conjugation
16. Bilirubin is displaced from plasma protein binding by which of the following drugs:
- Sulfonamides
 - Vitamin K
 - Salicylates
 - All of these
17. Entry of glucose into muscle and fat cells by GLUT-4 transporter is an example of:
- Facilitated diffusion
 - Active transport
 - Simple
 - diffusion
 - Both (a) and (c)
18. Polycyclic aromatic hydrocarbons (found as air pollutants) enhance metabolism of:
- Amitriptyline
 - Warfarin
 - Cimetidine
 - Both (a) and (b)
19. For which of the drugs, concentration is much greater than K_m :
- Aspirin
 - Ethanol
 - Phenytoin
 - All of the above
20. In phase-I reaction, Proguanil (anti-malarial) undergoes:
- Oxidation
 - Reduction
 - Hydrolysis
 - Cyclisation
21. Which statement is false?
- The density of gas is constant as long as its temperature remains constant.
 - Gases can be expanded without limit.
 - Gases diffuse into each other and mix almost immediately when put into the same container.
 - Pressure must be exerted on a sample of a gas in order to confine it.
22. Which of the following statements is not consistent with the kinetic molecular theory of gases?
- Individual gas molecules are relatively far apart.
 - The actual volume of gas molecules themselves is very small compared to the volume occupied by the gas at ordinary temperatures and pressures.
 - The average kinetic energy of different gases are different at the same temperature.
 - There is no net gain or loss of the total kinetic energy in collision between gas molecule.
23. A real gas most closely approaches the behavior of an ideal gas under conditions of
- High pressure and low temperature
 - Low pressure and high temperature


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- c. Low pressure and temperature
d. High pressure and temperature
24. For a gas which pair of variables is inversely proportional to each other(if all other conditions remain constant)
- a. P,T
b. P,V
c. V,T
d. n,V
25. Which of the following statements is false?
- a. The property of nitrogen gas will deviate more from ideality at -100 degree Celsius than at 100 degree Celsius.
b. Van der Waal equation corrects for the non ideality of the real gases
c. Molecules of methane at high pressure and low temperature have no attraction forces between each other.
d. Molecules of ideal gases are assumed to have no significant volume.
26. The abbreviation- m.d, stands for
- a. Every morning
b. Before meal
c. After meal
d. As directed
27. Which of the followings is used to calculate dose for a child according to body weight.
- a. Young's formula
b. Dilling's formula
c. Clark's formula
d. All of these
28. Match the following to make meaningful statements:
- | | |
|--------------------|--|
| 1. Hypnotics | (A) Glucose-6-P deficiency may cause hemolysis |
| 2. Methotrexate | (B) Main route of biotransformation is acetylation |
| 3. Corticosteroids | (C) Taken in nighttime in quiet surrounding |
| 4. Primaquine | (D) Dose is calculated in mg/sqmt of body weight |
| 5. Isoniazid | (E) Taken as single morning dose causes less adrenal suppression |
- a. 1(C) 2(D) 3(E) 4(A) 5 (B)
b. 1(B) 2(E) 3(C) 4(A) 5(D)
c. 1(B) 2(E) 3(A) 4(D) 5 (C)
d. 1(C) 2(D) 3(C) 4(A) 5(E)
29. Match the following drugs with their active form:
- | | |
|------------------|--------------------------------|
| 1. Dipivefrine | (A) Ampicillin |
| 2. Bacampicillin | (B) Fluorouridinemonophosphate |



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3. Sulfasalazine (C) Epinephrine
 4. Sulindac (D) 5-aminosalicylic acid
 5. Fluorouracil (E) Sulfidemetabolite
- a. 1(A) 2(B) 3(E) 4(C) 5 (D)
 b. 1(C) 2(A) 3(D) 4(E) 5(B)
 c. 1(D) 2(A) 3(C) 4(E) 5 (B)
 d. 1(E) 2(D) 3(C) 4(A) 5(E)

30. Match the following competitive inhibitor pairs of drug-enzyme:

1. Physostigmine (A) folatesynthetase
 2. Sulfonamide (B) dopa decarboxylase
 3. Allopurinol (C) cholinesterase
 4. Carbidopa (D) xanthine oxidase
- a. 1(A) 2(B) 3(C) 4(D)
 b. 1(C) 2(B) 3(D) 4(A)
 c. 1(C) 2(A) 3(D) 4(B)
 d. 1(C) 2(D) 3(A) 4(B)

31. Match the drugs with the tissues in which they are concentrated:

1. Digoxin A. Bone and teeth
 2. Iodine B. Iris
 3. Chloroquine C. Retina
 4. Atropine D. Heart
 5. Tetracycline E. Thyroid
- a. 1(D) 2(E) 3(C) 4(B) 5 (A)
 b. 1(E) 2(B) 3(A) 4(C) 5(D)
 c. 1(D) 2(A) 3(B) 4(C) 5 (E)



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d. 1(E) 2(D) 3(C) 4(B) 5(A)

32. Match the following non-competitive inhibitor pairs of drug-enzyme:

- | | |
|------------------|--|
| 1. Acetazolamide | A. Phosphodiesterase |
| 2. Indomethacin | B. Aldehyde dehydrogenase |
| 3. Disulfiram | C. Na ⁺ -K ⁺ -ATPase |
| 4. Digoxin | D. Cyclooxygenase |
| 5. Theophylline | E. Carbonic anhydrase |

a. 1(A) 2(B) 3(C) 4(D) 5 (E)

b. 1(E) 2(D) 3(B) 4(C) 5(A)

c. 1(D) 2(A) 3(B) 4(C) 5 (E)

d. 1(D) 2(B) 3(C) 4(D) 5(E)

33. What concentration of procaine hydrochloride will yield a solution iso osmotic with blood plasma? Freezing point of one percent procaine hydrochloride is -0.122 degree celsius.

- a. 0.9% w/v b. 4.26% w/v c. 9 % w/v d. 0.425 % w/v

34. An alcoholic solution contains 57.1 % v/v alcohol, which is said to be

- a. 25 proof b. 50 proof c. 57.1 proof d. 100 proof


35. All acids on treatment with a strong basic solvent tend to become indistinguishable in strength. This effect is called as:

- a. Spin effect
b. Chelating effect
c. Levelling effect
d. Shielding effect

36. Aprotic solvents possess

- a. Basic properties
b. Acidic properties
c. Both acidic and basic properties




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d. Neutral Character

37. The most commonly used indicator, phenolphthalein is a

- a. mono basic acid
- b. monoprotic acid
- c. diprotic acid
- d. triprotic acid

38. An example of a universal indicator is

- a. anthocyanin
- b. diosgenin
- c. methyl orange
- d. phenol red

39. Which interaction between a drug and receptor would favor a permanent damage of killing living cells?

- a. Charge transfer complex
- b. Induced dipole
- c. London dispersion attraction
- d. Covalent bonding


40. Identify the odd statement about bioisosteres.

- a. Groups possess identical outer shell electronic configuration
- b. Have near equal molecular shapes and volume
- c. Exert similar stereo chemical features
- d. Have similar physical properties

41. A classical example of bioisosteric modification is the development of local anesthetics, procaine and procainamide. Identify the class of bioisosterism to which it belongs.

- a. monovalent classical bioisosteric replacement
- b. divalent classical bioisosteric replacement
- c. trivalent classical bioisosteric replacement
- d. tetravalent classical bioisosteric replacement




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42. Which one of the following receptors have zinc finger domain in it?

- a. Intracellular receptor
- b. G-protein coupled receptor
- c. Ligand gated ion channel receptor
- d. Kinase linked receptor

43. Kinase linked receptor is an example of

- a. 1-TM receptor
- b. 3-TM receptor
- c. 4-TM receptor
- d. 7-TM receptor


44. How many ml of 50% w/v dextrose solution and how many ml of 5% dextrose solution are required to prepare 4500 ml of 10 % w/v solution?

- a. 500 ml of 50% and 4000 ml of 5% solution
- b. 1000 ml of 50% and 3500 ml of 5% solution
- c. 4000 ml of 50% and 500 ml of 5% solution
- d. 1500 ml of 50% and 3000 ml of 5% solution

45. Boric acid is a weak acid which can't be titrated with standard sodium hydroxide solution using phenolphthalein indicator. The titration is possible on addition of glycerol due to which of the following reasons?

- a. Boric acid becomes boronic acid
- b. Boric acid gives monoprotic tetravalent boron ester with glycerol
- c. Boric acid gives a tribasic acid on reaction with glycerol
- d. None of the above




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