



## NOTICE



## DEPARTMENT SCHOOL OF PHARMACY NOTICE

No: AJU/SOHAS/030/25

Date 28.01.2025

It is hereby notified that School of Pharmacy will conduct a career enhancement session **अभिवृद्धि** an Advanced level Intensive Care Approach for the aspirants to prepare them for National Level Entrance Examinations from 7<sup>th</sup> Feb-13<sup>th</sup> March 2025. The sessions will be conducted for final year B. Pharm students as per the timetable follows in the room number 211 of block SUSHRUTA. All the teachers of School of Pharmacy need to be involved in this session. Teachers need to bring 20 MCQs and have to discuss with the students.

### TIMETABLE

Sl. No.	Date	Name of Teacher	Time
1	7-2-2025	Sai Debass Panda	3:30 pm
2	8-2-2025	Priyabati Choudhury	3:30 pm
3	10-2-2025	Vikash Dash	3:30 pm
4	11-2-2025	Priyanshu Priya	3:30 pm
5	12-2-2025	Alok Kumar Moharana	3:30 pm
6	13-2-2025	Dr.Shweta	3:30 pm
7	15-2-2025	Sumanta Sen	3:30 pm
8	17-2-2025	Snigdha Rani Behera	3:30 pm
9	18-2-2025	Mansi Singh	3:30 pm
10	19-2-2025	Saswat Gaurab Dash	3:30 pm
11	20-2-2025	Nihar Ranjan Samantara	3:30 pm
12	21-2-2025	Ragini Bose	3:30 pm
13	24-2-2025	Rashmi Sinha	3:30 pm
14	25-2-2025	Abhishek Ghosh	3:30 pm
15	26-2-2025	Kashinath Mahato	3:30 pm
16	27-2-2025	Pakhi Chakraborty	3:30 pm
17	28-2-2025	Tunul Guna	3:30 pm
18	3-3-2025	Jyotirmaya Sahoo	3:30 pm
19	4-3-2025	Sonali Mandal	3:30 pm
20	5-3-2025	Sarmili Sahoo	3:30 pm
21	6-3-2025	Purnima Mahato	3:30 pm
22	7-3-2025	Atal Bihari Singh	3:30 pm
23	8-3-2025	Nisha Panda	3:30 pm
24	10-3-2025	Rashmi Tirkey	3:30 pm
25	11-3-2025	Chandan Nayak	3:30 pm
26	12-3-2025	Sarthak Singh	3:30 pm
27	13-3-2025	Ankita Moharana	3:30 pm

  
Dean  
School of Pharmacy  
ARKA JAIN University Jharkhand

**Dean**  
**School of Pharmacy**

**Copy to**

IQAC  
Office of the Registrar  
Class Coordinators  
Academic Coordinator  
ERP Coordinator  
In-charge Website  
Office file  
Student WhatsApp group

## अभ्यास

### A CAREER ENHANCEMENT SESSION FOR AN ADVANCED LEVEL INTENSIVE CARE APPROACH FOR THE ASPIRANTS TO PREPARE THEM FOR NATIONAL LEVEL ENTRANCE EXAMINATIONS

<b>Date of Event</b>	<b>07<sup>th</sup> Feb – 13<sup>th</sup> March 2025</b>
<b>Name of the Event</b>	<b>अभ्यास A Career Enhancement Session for an Advanced Level Intensive Care Approach for the Aspirants to Prepare them for National Level Entrance Examinations</b>
<b>Type of the Event</b>	<b>Slow and Advanced Learning _ Career Enhancement</b>
<b>Conducted by</b>	<b>School of Pharmacy</b>
<b>No. Of Participants</b>	<b>61 on Average</b>

#### OBJECTIVE:

To cater to the diverse learning paces of students within a classroom by providing targeted support to both "slow learners" who require extra time and assistance to grasp concepts, and "advanced learners" who can benefit from enriched activities to further develop their skills, ultimately aiming to maximize the academic potential of every student in the class, regardless of their learning speed.

#### DETAILS:

School of Pharmacy conducted अभ्यास a Career Enhancement Session for an Advanced Level Intensive Care Approach for the Aspirants to Prepare them for National Level Entrance Examination from 07th Feb – 13th March 2025 and also aiming to the intensive care for the slow as well as advanced learners. A lesson plan was prepared for the 8th semester students so that a thorough practice can be made to make them efficient for the national level entrance examinations as well as subject based knowledge. Each faculty prepared 20 MCQs blindly for the practice of the students. Indeed, this is an efficient effort for the development of the slow and advanced learners.

#### TAKEAWAY (OUTCOMES):

A deeper understanding of the topic through addressing diverse perspectives and clarifying uncertainties by actively engaging with questions and providing well-structured responses; essentially, it's an opportunity to identify knowledge gaps and strengthen your comprehension by actively engaging with potential inquiries.



POSTER OF THE EVENT



# SCHOOL OF PHARMACY

Conducts

**अभ्यास**

**A Career Enhancement session  
for an Advanced level  
Intensive Care approach for the  
Aspirants to Prepare them for  
National Level Entrance  
Examinations**

**07th FEBRUARY - 13th MARCH, 2025**

**Time: 03:30 PM Onwards**

**Venue : SUSHRUTA Block**

**A session on students' skill development for  
career enhancement**

## PHOTOS OF THE EVENT



**Fig.1: Geotag Photos During the session ABHYAS conducted**

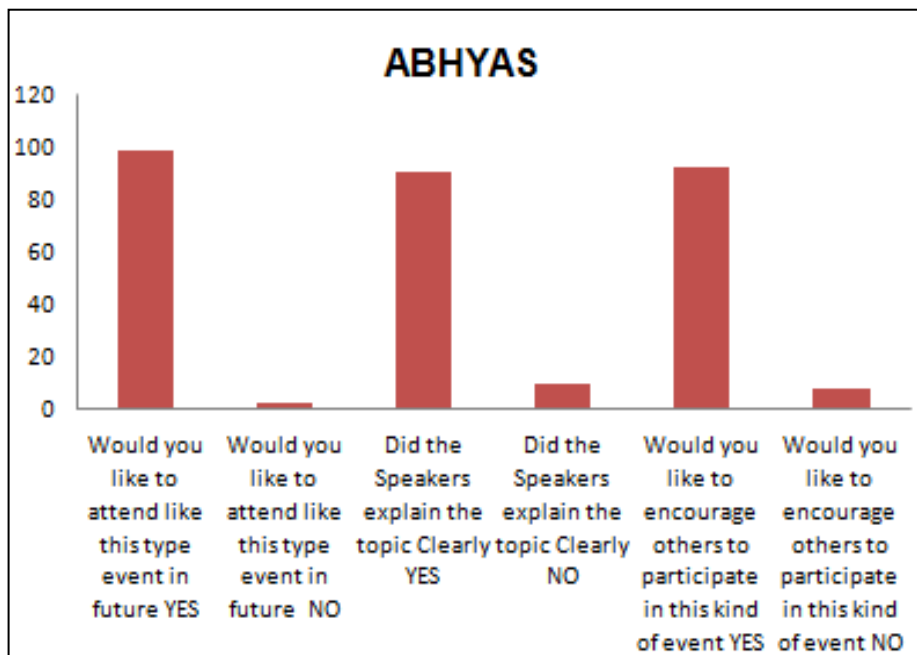
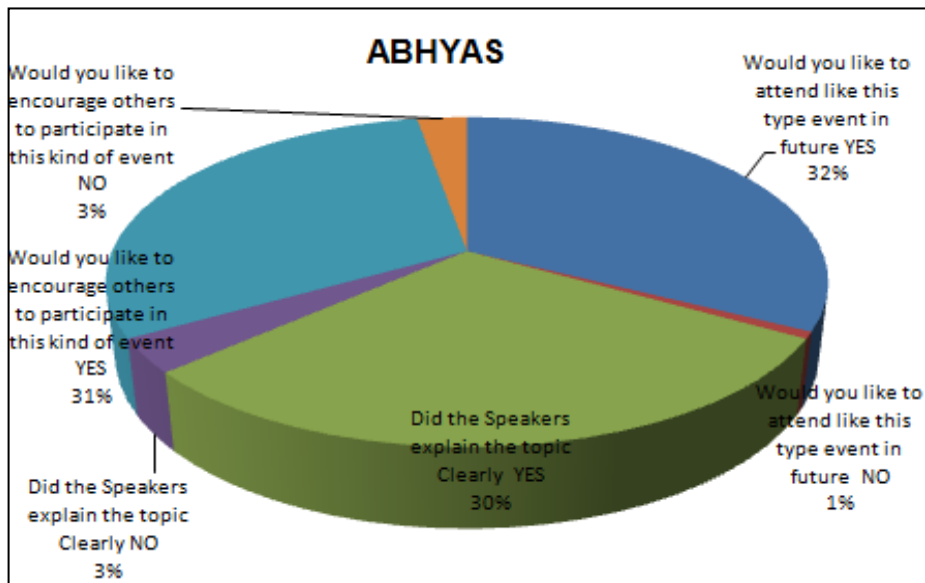


**Fig.2: Students engaged in the session ABHYAS**



**Fig.3: Teacher made the students engaged in the session ABHYAS**

## FEEDBACK ANALYSIS



## LIST OF PARTICIPANTS

ARKA JAIN University Jharkhand NAAC GRADE A ACCREDITED UNIVERSITY  
**SCHOOL OF PHARMACY**  
**EVENT ATTENDANCE SHEET**  
 DATE: 07.02.25 To 13.03.25

*Name: A career enhancement session for an advanced level intern on case approach for the development & preparation of a national level case presentation*

S.No.	Students Name	Enrollment number	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	
01	Hemant Panda	A3U210720																												
02	KRITI KUMARI	A3U210663																												
03	Samiksha	A3U210494																												
04	Rishika	A3U210330																												
05	Sanya Nanda	A3U210364																												
06	Suman Hake	A3U210540																												
07	Prachi Kaur	A3U210334																												
08	Himanshi K	A3U210231																												
09	Jyoti Kumar	A3U210149																												
10	Koushik Kumar	A3U210101																												
11	Shreyas Singh	A3U210206																												
12	Anya Kumari	A3U210202																												
13	Raksh Malviya	A3U210140																												
14	Kanishk K	A3U210201																												
15	Sanya Das	A3U210100																												
16	Md. Akshay	A3U210252																												
17	NISHANT	A3U210285																												
18	Tyson	A3U210102																												
19	Pranav Kumar	A3U210166																												
20	Rishika	A3U210150																												
21	Abhinav	A3U210226																												
22	Prachi	A3U210635																												
23	Koushik Malviya	A3U211206																												
24	Prachi	A3U210203																												

Signature of the Dean of Pharmacy: \_\_\_\_\_  
 ARKA JAIN University Jharkhand

Signature of the Event Co-ordinator: \_\_\_\_\_  
 Praveen Kumar

ARKA JAIN University Jharkhand NAAC GRADE A ACCREDITED UNIVERSITY  
**SCHOOL OF PHARMACY**  
**EVENT ATTENDANCE SHEET**  
 DATE: 07.02.25 To 13.03.25

*Name: A career enhancement session for an advanced level intern on case approach for the development & preparation of a national level case presentation*

S.No.	Students Name	Enrollment number	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	
25	AKASH KOHAR	A3U210049																												
26	Rana Paul	A3U210284																												
27	Samriddha	A3U210283																												
28	Abhinav Kumar	A3U210085																												
29	Taruni Ghosh	A3U210116																												
30	Anjali Kumar	A3U210284																												
31	Prachi	A3U210284																												
32	ANAMI SHARMA	A3U210284																												
33	Pratham Sankar	A3U210341																												
34	KUMAR ARYAN	A3U210342																												
35	Prachi	A3U210495																												
36	Prachi Kumar	A3U210434																												
37	Satyam	A3U210100																												
38	Amit	A3U210465																												
39	Chiranjeev	A3U210490																												
40	Chitra	A3U210491																												
41	Samriddha	A3U211012																												
42	Prachi	A3U210285																												
43	Rishika	A3U210175																												
44	Rishika	A3U211171																												
45	Prachi	A3U210330																												
46	Prachi	A3U210484																												
47	Prachi	A3U210488																												
48	Prachi	A3U210491																												

Signature of the Dean of Pharmacy: \_\_\_\_\_  
 ARKA JAIN University Jharkhand

Signature of the Event Co-ordinator: \_\_\_\_\_  
 Praveen Kumar



" ११११११११ " DATE: 07-02-25 TO 13-03-25

NAME: A career enhancement session for an advanced level bachelors course approach for an equivalent to prepare them for National level Exams. SCHOOL OF PHARMACY

EVENT ATTENDANCE SHEET

S.No	Students Name	Enrollment number	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	
49	Jishu Mishra	AJU/21083	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
50	NEHA MAHATO	AJU/21084	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
51	Arushi Saini	AJU/21085	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
52	Sudip Kundu	AJU/21086	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
53	ANJALI	AJU/21087	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
54	Arushi Kumar	AJU/21088	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
55	Rohit Kumar	AJU/21089	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
56	Jayashree	AJU/21090	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
57	Suman Mahapatra	AJU/21091	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
58	Rohit Gupta	AJU/21092	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
59	Arushi Mahapatra	AJU/21093	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
60	Pranshu Mishra	AJU/21094	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
61	Arun Das	AJU/21095	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
62	Sagar Kumar	AJU/21096	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
63	Arushi Mahapatra	AJU/21097	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
64	Harshita	AJU/21098	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
65	Soumya Paul	AJU/21099	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
66	Arushi K.M.	AJU/21100	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
67	ANJALI GHOSH	AJU/21101	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
68	Arushi Ghosh	AJU/21102	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
69	Arushi Ghosh	AJU/21103	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
70	Arushi Ghosh	AJU/21104	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
71	Arushi Ghosh	AJU/21105	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present

Signature of the Dean: *[Signature]* ARKA JAIN University Jharkhand

Signature of the Event Co-ordinator: *[Signature]*



**SCANNED COPY OF SAMPLE EVALUATED PRACTICE PAPER**

**ABHYAS**

Name of Student Susmita Shuwa Date 3<sup>rd</sup> March 2025  
Enrolment No. AJU/210804

1- Passive Diffusion expressed best by which of the following laws  
 a. Darcy's law  
 b. Fick's law  
 c. Noyes Whitney  
 d. None of above

2- The liquid uptake by the process endocytosis is called as  
 a. Phagocytosis  
 b. Transcytosis  
 c. Pinocytosis  
 d. None of above

3- Why stomach is not a principal part of Drug absorption  
 a. Small mucosal area  
 b. Limited Gastric Residence time  
 c. Unfavorable PH range  
 d. All above

4- Which among the following is not a factor for influencing gastric emptying?  
 a. Pleasant state  
 b. Viscous meal  
 c. Body posture  
 d. Temperature of meal

5- Which of the following experiment is recommended for drug absorption is not under in vitro  
 a. Donor Compartment model  
 b. Receptor Compartment model  
 c. Inverted Sieve Method  
 d. None of above

6- Transporting of drug by ultrasound through skin is called as  
 a. Phonophoresis  
 b. Iontophoresis  
 c. Transphoresis  
 d. None of above

7- When by the influence of temperature and pressure, a crystal changes its behavior from one form to another form reversibly then it is called as  
 a. Monotropes  
 b. Enantiotropes  
 c. Parametric polymorph  
 d. Slow polymorph

19/20

8- Area in which carrier system is most dense is called as  
 a. Distribution window  
 b. Absorption window  
 c. Elimination window  
 d. Metabolism window

9- Which among the following sites is not responsible for bio-transformation  
 a. Liver  
 b. Brain  
 c. Testis  
 d. None of above

10- When deficiency of drug metabolism is inherited then the factor affecting biotransformation is due to  
 a. Diet  
 b. Age  
 c. Species  
 d. Genetic

11- Which of the following site is belongs to be a part of drug Excretion with reference to renal Excretion  
 a. Bile  
 b. Saliva  
 c. Kidney  
 d. Sweat

12- When the passage through liver is required to be minimized, then which among followings is an appropriate alimentary route of drug administration is suggested for drug absorption  
 a. Transdermal  
 b. Oral  
 c. Rectal  
 d. None of above

13-  $t_{1/2}$  does not depend upon  
 a. Time of drug absorption  
 b. Biotransformation  
 c. Rate of drug elimination  
 d. Plasma drug concentration

14-  $t_{1/2}$  is the time required to  
 a. Bind half of the drug administered to plasma protein  
 b. Absorb half of an introduced drug  
 c. Change the amount of a drug in plasma by half during elimination  
 d. None of above

15- Rate of diffusion of drug across biological membrane is  
 a. Indirectly proportional to the thickness of the membrane  
 b. Directly proportional to concentration gradient  
 c. Route of administration dependent  
 d. None of above

16- Noyes and Whitney equation correlates to which of the following phenomenon  
 a. Absorption  
 b. Disintegration  
 c. Dissolution  
 d. None of above

17- Which organ has highest capacity for drug transformation  
 a. Skin  
 b. Spleen  
 c. Kidney  
 d. Liver

18- What makes the difference an UOP Dissolution test appropriate over IP Dissolution test apparatus  
 a. Basket  
 b. Paddle  
 c. Reciprocating cylinder  
 d. Paddle over drug

19- According to BCS system class 2 drugs come under  
 a. Low solubility low permeability  
 b. High solubility high permeability  
 c. High solubility low permeability  
 d. Low solubility high permeability

20- Molecular form of drug dissolved fast due to  
 a. Unaltered angle of absorption  
 b. Increased viscosity  
 c. Increased surface area  
 d. None of above

20/25

**SCHOOL OF PHARMACY**

ANSWER ALL THE QUESTIONS

NAME: Susmita Kumar ENROLLMENT NO.: AJU/210437

1- The term Pharmacognosy was first introduced by:  
 a) Dioscorides  
 b) C.A. Seydler  
 c) Galen  
 d) Rudolf Brandes

2- The major alkaloid present in Opium is:  
 a) Quinine  
 b) Morphine  
 c) Reserpine  
 d) Atropine

3- The tropane alkaloids are obtained from:  
 a) Atropa belladonna  
 b) Papaver somniferum  
 c) Cinchona officinalis  
 d) Ephedra sinica

4- Which test is used to identify alkaloids?  
 a) Borntrager's test  
 b) Dragendorff's test  
 c) Molisch's test  
 d) Keller-Kiliani test

5- The main active constituent of Digitalis purpurea is:  
 a) Digoxin  
 b) Quinine  
 c) Senoside  
 d) Reserpine

6- Which of the following plants contains Anthraquinone glycosides?  
 a) Digitalis  
 b) Aloe  
 c) Rauwolfia  
 d) Ephedra

7- Which of the following is a Resinous drug?  
 a) Acacia  
 b) Myrrh  
 c) Starch  
 d) Agar

8- The major constituent of Eucalyptus oil is:  
 a) Cineole  
 b) Eugenol  
 c) Citral  
 d) Camphor

18/20

9- Which of the following contains Hydrolyzable tannins?  
 a) Cinchona  
 b) Myrobalan  
 c) Ephedra  
 d) Rauwolfia

10- The major polyphenol found in Green Tea is:  
 a) Catechin  
 b) Senoside  
 c) Quinine  
 d) Diosgenin

11- Which of the following is NOT a tannin test?  
 a) Goldbeater's test  
 b) Molisch's test  
 c) Ferric chloride test  
 d) Gelatin test

12- The technique used for separation of plant constituents based on polarity is:  
 a) Chromatography  
 b) Crystallization  
 c) Soxhlet extraction  
 d) Precipitation

13- The best method for extracting volatile oils is:  
 a) Soxhlet extraction  
 b) Steam distillation  
 c) Maceration  
 d) Decoction

14- The test used to detect Steroids is:  
 a) Keller-Kiliani test  
 b) Salkowski test  
 c) Dragendorff's test  
 d) Fehling's test

15- The identification of Flavonoids is done by:  
 a) Borntrager's test  
 b) Shinoda test  
 c) Biuret test  
 d) Fehling's test

16- Marker compounds in herbal drugs are used for:  
 a) Detecting adulteration  
 b) Increasing bioavailability  
 c) Standardizing herbal formulations  
 d) Improving solubility

17- The anticancer drug Paclitaxel (Taxol) is obtained from:  
 a) Digitalis purpurea  
 b) Ephedra sinica  
 c) Taxus brevifolia  
 d) Artemisia annua

18- Curcumin, a bioactive compound, is obtained from:  
 a) Aloe vera  
 b) Curcuma longa  
 c) Emblica officinalis  
 d) Piper nigrum

19- The main chemical class of Reserpine is:  
 a) Steroidal alkaloid  
 b) Tindole alkaloid  
 c) Quinolone alkaloid  
 d) Purine alkaloid

20- HPLC is mainly used for:  
 a) Identification of active constituents  
 b) Purification of proteins  
 c) Isolation of DNA  
 d) Measuring viscosity

**ARKA JAIN University**   
**AVYASH**  
**SCHOOL OF PHARMACY**  
**SUBJECT: PHARMACEUTICAL ANALYSIS**  
**TOPIC: HPLC**

**TIME: 20 MINUTES** **MARKS: 20**

- The most widely used pumps in HPLC are  
 a. Syringe type pumps b. Constant pressure pumps c. Reciprocating piston type pumps d. All of the above
- In post column derivatization can be done by  
 a. Adjusting pH to alkaline b. Adjusting pH to acidic c. Using an acid or alkaline buffer d. All of the above
- Reverse phase column contains  
 a. C12 b. C18 c. C21 d. C13
- Which type of HPLC column packing material is most commonly used for pharmaceutical applications?  
 a. Polymer-based b. Glass-based c. Silica-based d. Metal-based
- What is the significance of the "peak area" in HPLC analysis?  
 a. It represents the time taken for a compound to elute. b. It is used to calculate the concentration of a compound  
 c. It measures the column temperature. d. It controls the pump pressure.
- What is the primary role of injector in an HPLC system?  
 a. To detect the analytes b. To generate high pressure  
 c. To introduce the sample into the mobile phase d. To maintain the column temperature.
- In HPLC, which type of detector is most commonly used for detecting compounds that absorb UV light?  
 a. Ultraviolet Detector b. Refractive index detector c. Fluorescence Detector d. Electrochemical Detector
- Which parameter in HPLC is most directly controlled by the column thermostat?  
 a. Flow rate b. Column temperature c. Detector sensitivity d. Mobile phase composition
- What is the main function of the guard column in an HPLC system?  
 a. To increase the pressure in the system b. To increase the sensitivity of the detector  
 c. To speed up the analysis time d. To protect the analytical column from impurities
- What is the purpose of degassing the mobile phase in HPLC?  
 a. To sterilize the mobile phase b. To increase the viscosity of the mobile phase  
 c. To remove dissolved gases that can form bubbles d. To change the polarity of the mobile phase
- In HPLC, what is the effect of increasing the flow rate of the mobile phase?  
 a. It improves peak symmetry b. It decreases the retention time  
 c. It increases the resolution d. It increases the baseline noise
- Which component of the HPLC system is used to separate the different analytes in the sample?  
 a. Detector b. Pump c. Injector d. Column
- The resolution in an HPLC separation can be improved by:  
 a. Using a detector with a lower wavelength b. Decreasing the mobile phase flow rate

**ARKA JAIN University**   
**AVYASH**  
**SCHOOL OF PHARMACY**  
**SUBJECT: PHARMACEUTICAL ANALYSIS**  
**TOPIC: HPLC**

**TIME: 20 MINUTES** **MARKS: 20**

- Reducing the particle size of the stationary phase d. increasing the column temperature
- Which of the following materials is most commonly used as stationary phase in a reversed phase HPLC column?  
 a. Alumina b. Octadecylsilane c. Polystyrene d. Silica gel
- The main purpose of the derivatization in HPLC is  
 a. To increase the resolution b. To increase the detectability of a compound  
 c. To decrease the retention time d. All of the above
- What is the purpose of the injection valve in an HPLC system?  
 a. To control the flow rate of the mobile phase b. To introduce the sample onto the column  
 c. To regulate the column temperature d. To monitor the detector sensitivity
- What is the purpose of using a gradient elution in HPLC?  
 a. To decrease the detector sensitivity b. To improve the separation of analytes with widely varying polarities  
 c. To reduce the overall run time d. To maintain a constant retention time for all analytes
- In HPLC, what is the purpose of the autosampler?  
 a. To control the mobile phase composition b. To maintain a constant flow rate  
 c. To inject a precise and reproducible volume of the sample d. To detect the analytes
- In gradient elution HPLC, what happens to the composition of the mobile phase during the run?  
 a. It changes gradually over time b. It remains constant  
 c. It fluctuates randomly d. It is replaced by the stationary phase
- Degassing of the mobile phase can be done by all of the following except  
 a. Distillation b. Sparging c. Reverse osmosis d. Vacuum pumping

NAME: CHETNA SANILYA  
 ENROLLMENT NO: 2021/210910

**ANSWERS**

1. <input checked="" type="checkbox"/> d	6. <input checked="" type="checkbox"/> c	11. <input checked="" type="checkbox"/> b	16. <input checked="" type="checkbox"/> b
2. <input checked="" type="checkbox"/> b	7. <input checked="" type="checkbox"/> a	12. <input checked="" type="checkbox"/> d	17. <input checked="" type="checkbox"/> b
3. <input checked="" type="checkbox"/> b	8. <input checked="" type="checkbox"/> b	13. <input checked="" type="checkbox"/> d	18. <input checked="" type="checkbox"/> c
4. <input checked="" type="checkbox"/> b	9. <input checked="" type="checkbox"/> c	14. <input checked="" type="checkbox"/> b	19. <input checked="" type="checkbox"/> a
5. <input checked="" type="checkbox"/> a	10. <input checked="" type="checkbox"/> c	15. <input checked="" type="checkbox"/> a	20. <input checked="" type="checkbox"/> b