P.R. Government College (Autonomous)

Kakinada

(Affiliated to Adikavi Nannaya University)

Inspiring Tomorrow College Chemists

Department of Chemistry

B. Sc., Pharmaceutical Chemistry (Hons)

Board of Studies

2025-2026

PROCEEDINGS OF THE PRINCIPAL(FAC), P.R. GOVERNMENT COLLEGE(A), KAKINADA-A. P

Present: Dr. K.Anjaneyulu, M.A, Ph.D.

R.C.No.10/A.C/BOS members nomination/2025-26, Dated: 31.07.2025

SUB: P.R. Government College(A), Kakinada-UG Board of Studies (BOS)- Program/Course-Nomination of Members-Orders issued.

REF: 1. UGC Guidelines for Autonomous Colleges-2018.

ORDERS:

The Principal, P.R. Government College(A), Kakinada is pleased to constitute UG Boards of Studies in Pharmaceutical Chemistry for framing the syllabi in respective Subject for all Semesters duly following the norms of the UGC Autonomous guidelines.

S. No	Name of the Person	Designation
1	Sri V. Sanjeev Kumar	Chairman
2	Dr. P. Sai Kiran School of Pharmacy, Aditya University, KKD	University Nominee
3	Dr. M. Nygi Kurian Bhavan's Vivekananda College, SC	Subject Expert -I
4	Dr.Ch.S.Phani Kumar School of Pharmacy, Aditya University, KKD	Subject Expert - II
5	Dr.P. Karuna Raman Ideal Organics, HYD	Representative from Industry
6	Sri. T.V.V. Satyanarayana	Member
7	Sri. P. Vijaya Kumar	Member
8	Sri. V. Rambabu	Member
9	Smt. G. Pavani	Member
10	Dr. N. Bujji Babu	Member
11	Dr. A. Chandra leela	Member
12	Dr. Ch. Praveen	Member
13	Sri. V. Venkateswara Rao	Member
14	Sri. U.S.N. Prasad	Member
15	Dr. D. S. V. N. Ramamurthy	Member
16	M. S. S. V. Uma Gayathri	Member
17	I.S.Bhuvaneswari	Alumni Member
18	I. Jahnavi II B.Sc Pharma Chemistry (H)	Student Member
19	G. Adi narayana II B.Sc Pharma Chemistry (H)	Student Member

The above members are requested to attend the BoS meeting on 07-08-2025 and share their valuable reviews, and suggestions on the following functionaries.

- Prepare syllabi for the subject keeping in view the objectives of the college and interest of the stake holders for consideration and approval of the IQAC and Academic Council.
- Suggested methodologies for innovative teaching and evaluation techniques.
- Suggest the panel of Names to the academic council for appointment of Examiners.
- Coordinate research, teaching, extension and other activities in the Department of the college.

PRINCIPAL
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P.R. Government College(Autonomous)
Pithapur Rajah's Government College(A)

PROCEEDINGS OF THE PRINCIPAL (FAC), PITHAPUR RAJAH's GOVT. COLLEGE [A], KAKINADA
Present: Dr. Kandula Anjaneyulu, M.A, Ph.D.

Rc.No.9/A.C/BOS/2025-26 **Dt.31 July 2025**

Sub: Pithapur Rajah's Government College[A] Kakinada–Academic Cell- Conduct of BOS Meetings for the Academic Year 2025-26 - Guidelines issued - Regarding.

ORDER:

The autonomous colleges, in alignment with their vision, mission, stated objectives, and core values, are mandated to design and develop their own outcome-based curricula. This must be done with due consideration for societal, local, and global industry requirements, employability, and the development of industry-ready and transferable skills. Accordingly, every programme shall prescribe Course Outcomes (COs), Programme Outcomes (POs), and Programme Specific Outcomes (PSOs) along with a suitable learning outcome assessment management system, supported by a robust and transparent evaluation mechanism to measure attainment levels among students.

Further, the A.P. State Council of Higher Education (APSCHE) has introduced a revised curricular framework effective from the Academic Year 2025-26, incorporating Skill Enhancement Courses, Multi-Disciplinary courses, the Indian Knowledge System and a revised credit structure.

Our institution, from the Academic Year 2022–23 onwards, has defined a renewed vision and mission along with updated objectives and core values, necessitating the design and reorientation of its academic and research administration in line with these directives.

In light of the above responsibilities prescribed by the institution's vision and mission, NEP–2020, NAAC, NIRF, and the APSCHE's revised and new UG and P.G. curricular framework, it is imperative to customize, design, and re-orient our academic and research activities to meet the expectations of students, industries, and government stakeholders.

Accordingly, the Chairpersons of the U.G and P.G Boards of Studies (BoS) of various departments are hereby requested to make necessary arrangements to convene their BoS meetings before **09 Aug 2025.**

The Chairpersons are further instructed to:

1. Prepare the curricula and extracurricular activities for the Academic Year 2025–26 in line with the institution's vision, mission, NEP–2020, and NIRF norms.
2. Devise an appropriate evaluation system to ensure effective learning outcomes and holistic student development.
3. Ensure that the curriculum design includes a mandatory *20% revision* of the syllabus each year without deviating from the APSCHE prescribed syllabus.
4. If the syllabus is not prescribed by APSCHE/Affiliating University, then the syllabus is to be

framed by the BOS committee concerned with duly following the mandate prescribed above.

5. Engage stakeholders viz employers, parents, and alumni, to obtain feedback on the existing curricula and to invite suggestions for improvements.
6. Invite the University nominee, subject experts, industry representatives, student representatives, and parent representatives well in advance. The meeting notice shall clearly specify the date, venue, and agenda, and a soft copy of the agenda and relevant documents shall be circulated for their perusal.
7. Ensure that the subject experts invited preferably hold a Doctorate with at least 10 years of teaching experience and have relevant expertise in designing industry-related, market- and job-oriented curricula.
8. Facilitate thorough deliberations on curriculum design, evaluation methods, incorporation of research components, measures to enhance learning experiences, and optimal utilization of existing human, physical, and ICT resources.
9. Conduct all BoS meetings in offline mode. Online participation shall be permitted only under exceptional circumstances.
10. Prescribe benchmarking and quality initiatives in pedagogy and learning, including strategies for curriculum design and teaching-learning processes, in collaboration with the IQAC Coordinator, prior to the BoS meeting.
11. Ensure that a minimum student attendance of **75%** shall be required for eligibility to appear for I & II Mid-Term Examinations under the CIA component; this shall be formally approved in the BoS meeting.
12. Approve any new programmes to be introduced for the Academic Year 2025–26, the number and frequency of certificate courses, and SWAYAM MOOCs courses.
13. Submit the approved BOS copies in the prescribed format, in **quadruplicate (hard copies)** to the Academic Cell for onward submission to the IQAC, Examination Cell, and Library, within **three days** of the meeting and upload the soft copy in their respective department web pages in the college website.
14. Ensure strict alignment of all recommendations and curriculum changes with the institution's vision and mission.
15. Submit a request to receive advance funds from the Examination cell through Principal for conducting BoS meetings.

The details of honorarium to be paid to the University Nominee and Subject Experts attending the Board of Studies (BOS) meeting are as follows

UG BOS for AY 2025-26

S.No	Designation	Honorarium (Rs)	TA
1	University Nominee	1000	Below 20 Km @Rs.200/- (Local Conveyance) Above 20 Km, Bus fare/Train fare (Whichever is less)
2	Subject Expert	500	Below 20 Km @Rs.200/- (Local Conveyance) Above 20 Km, Bus fare/Train fare (Whichever is less)
3	Industrialist	500	Below 20 Km @Rs.200/- (Local Conveyance) Above 20 Km, Bus fare/Train fare (Whichever is less)

PG BOS for AY 2025-26

S.No	Designation	Honorarium (Rs)	TA
1	University Nominee	1000	Below 20 Km @Rs.200/- (Local Conveyance) Above 20 Km, Bus fare/Train fare (Whichever is less)
2	Subject Expert	500	Below 20 Km @Rs.200/- (Local Conveyance) Above 20 Km, Bus fare/Train fare (Whichever is less)
3	Industrialist	500	Below 20 Km @Rs.200/- (Local Conveyance) Above 20 Km, Bus fare/Train fare (Whichever is less)

- Binding charges limited to Rs.250/- per program.
- The Bills/Vouchers shall be in compliance with applicable rules and norms.

Following contents shall be presented in the BOS document in the order

1. Proceedings of the Principal pertaining to BOS
2. Composition of BOS
3. Vision and Mission of the department
4. Agenda: It shall include ATR on the previous BOS meeting first, resolutions, etc., later.
5. Table showing the Allocation of Credits in the following table for both theory and Practicals' in case of science subjects

S. No	Semester	Title of the Course (Paper)	Hrs./week	Max. Marks (SEE)	Marks in CIA	Credits
1	III	Physical Chemistry-1	3	50	50	4

6. Resolutions adopted in the meeting with detailed discussion that took place during the meeting.
7. Each BOS Chairman shall, immediately after syllabus, tabulate the changes made in the syllabus/ paper along with justification.
8. Attendance of Members present with signatures in the tabular form.
9. List of Examiners & Paper setters (Minimum 20 members and at least 02 members from other states)
10. Syllabus for each course (both theory & Practical in case of Science subjects) followed by model question papers (theory & practical) and allocation of CIA (50marks) for each course with structure.
11. Each student (2025-26 AB) has to complete one MOOCS course from SWAYAM in any subject per year.

CIA structure for Single Major system

- Out of 50 marks for CIA, 25 marks are allocated for Mid examinations. In each semester two mid examinations to be conducted and the average of the two will be considered.
- Mid examinations are to be conducted in offline mode at college level
- Mid examination to be conducted in offline mode in which the student should attempt **one essay** question for ten marks out of two questions, **three short** answer questions with five marks each out of five questions
- The remaining 25 marks for CIA are allocated as per the following structure.

Project-10M	Seminar- 5M	Assignment- 5M	Viva on theory- 3M	Clean & green and Attendance- 2M

TEMPLATE FOR BOS COMPOSITION

PROCEEDINGS OF THE PRINCIPAL(FAC), P.R. GOVERNMENT COLLEGE(A), KAKINADA

Present: Dr. Kandula Anjaneyulu, M.A, Ph.D.

R.C.No.10/A.C/BOS Members Nomination/2025-26 Dated: 31.07.2025

SUB: P.R. Government College(A), Kakinada- UG/PG Board of Studies (BOS) - Nomination of Members - Orders issued.

REF: Proc.RC.No.9/A.C/BOS/2025-26 dated:31 July 2025 of the Principal, Pithapur Rajah's Government College(A) Kakinada.

ORDER:

The Principal, P.R. Government College(A), Kakinada is pleased to constitute UG/PG Boards of Studies in ----------for framing the syllabi in respective Subject for all Semesters duly follqwing the norms of the UGC Autonomous guidelines.

S. No	Name of the Person	Designation
1		Chairman & Lecturer Incharge, Department.
2		University Nominee
3		Subject Expert -I Lecturer in.
4		Subject Expert - II Lecturer in
5		Representative from Industry
6		Member
7		Member
8		Member
9		Member
10		Member
11		Member
12		Member
13		Member
14		Member
15		Student Alumni Member
16		Student Member
17		Student Member

The above members are requested to attend the BoS meeting on - -2025 and share their valuable reviews, and suggestions on the following functionaries.

- Prepare syllabi for the subject keeping in view the objectives of the college and interest of the stake holders for consideration and approval of the IQAC and Academic Council.
- Suggested methodologies for innovative teaching and evaluation techniques.
- Suggest the panel of Names to the academic council for appointment of Examiners.
- Coordinate research, teaching, extension and other activities in the Department.

PRINCIPAL

P.R. Government College(A), Kakinada

The Chairpersons of all Boards of Studies are hereby instructed to comply with these directives in letter and spirit to ensure the highest standards of academic and administrative excellence.

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Pithapur Rajah's Government College(A)
KAKINADA-533 001.
Kakinada

Copy to:

1. Lecturers-in-Charge (BOS Chairmen) of all the departments
2. Academic Coordinator
3. IQAC coordinator
4. Controller of Examinations
5. Office

ADIKAVI NANNAYA UNIVERSITY RAJAMAHENDRAVARAM
OFFICE OF THE DEAN, ACADEMIC AFFAIRS

No.ANUR PR (A)/BoS/2025/38 Dt.17.06.2025

PROCEEDINGS OF THE VICE-CHANCELLOR

Sub: ANUR – University Nominees – UG Board of Studies of Pithapur Rajah's Government College (A) Kakinada – Orders – Issued
Read: -Note orders of the Vice-Chancellor dated 13.06.2025

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ORDER:

With reference to above, the Vice-Chancellor is pleased to order that the following members be nominated as University Subject Experts for constitution of UG Board of Studies of Pithapur Rajah's Government College (A) Kakinada, for a period of 3 years from the date of orders issued as detailed against each subject.

Sl. No	BOS	Name of the expert nominated
1	English	Prof.S.Prasanthi Sree, M.S.N Campus Kakinada
2	Telugu	Dr.S.Gopalayya, GDC Tadepalligudem
3	Hindi	Dr.N.V.Ramana, GDC Ramachandrapuram
4	Sanskrit	Dr.P.Umamaheswara Rao, Dr.V.S Krishna GDC (A), Visakhapatnam
5	Mathematics	Ms.Y.Padmaja GDC Ramachandrapuram
6	Statistics	Dr.N.Madavi GDC(A) RJY
7	Physics, Electronics & Renewable energy	Dr.M.V.K.Mohar, GDC, K.Perupalem
8	Chemistry, Organic Chemistry, Analytical Chemistry	Dr.T.Narasimha Murthy, GDC (A) RJY
9	Pharmaceutical Chemistry	P.Sai Kiran, Adithya University Kakinada
10	Botany	Dr.K.Usha sri GDC Pithapuram
11	Zoology	Dr.K.Ramaneswari, AKNU, RJY
12	Aquaculture	Dr.D.Kalyani, AKNU, RJY
13	Biotechnology	Dr.B.Nageswari, GDC (A) RJY
14	Microbiology	Dr.D.Aruna, SRR & CVR GDC (A) Vijayawada
15	Artificial Intelligence	N.Naga Subrahmanyeswari, ASD College for Women (A), Kakinada
16	Data Science	Sri.K.Rasmi Ranjan, GDC(A), Tuni
17	Internet of Things	Smt.Dr.K.Sobha Rani, GDC, Ramachandrapuram
18	Computer Applications	Smt.Dr.K.Sobha Rani, GDC, Ramachandrapuram
19	Information Technology	Smt.N.Naga Subrahmanyeswari, ASD College for Women (A), Kakinada
20	Economics	Dr.K.Yamuna, ASD GDC(W), Kakinada
21	History	Ch.Padmavathi, GDC, Pithapuram
22	Political Science & International relations	Dr.K.Swamiji, Ideal DC(A), Kakinada
23	Commerce & Management	Dr.G.Arun Kumar, Dr.VS Krishna GDC(A) Visakhapatnam
24	Philosophy	Dr.Ch.Lalitha, GDC(A) Tuni

(BY ORDER)

Dean,
Academic Affairs 17.6.25

To
The Principal, Pithapur Rajah's Government College (A) Kakinada
The Above Members
The Principals concerned

PITHAPUR RAJAH'S GOVERNMNET COLLEGE (A) :: KAKINADA

DEPARTMENT OF CHEMISTRY

MEMBERS ATTENDED FOR BoS MEETING FOR THE AY 2025-26

PHARMACEUTICAL CHEMISTRY

DATE: 07-08-2025

SNO	Name of the Member	DESIGNATION	SIGNATURE
1	Sri V. Sanjeev Kumar	Chairman, BoS Head of the department	V. SL
2.	Dr. P. Sai Kiran Aditya College of Pharmacy, KKD	University Nominee	
3.	Dr. M. Nygi Kurian Bhavan's Vivekananda College, SC	Subject Expert	7/8/2025.
4.	P. Karuna Raman Ideal Organics, HYD	Industrialist	Dr.P.Karuna Raman
5.	Dr. Ch. S. Phani Kumar School of Pharmacy Aditya University	Subject Expert	
6.	Sri. T.V.V. Satyanarayana	Member	T.V.V. Sty
7.	Sri. P. Vijaya Kumar	Member	
8.	Sri. V. Rambabu	Member	
9.	Smt. G. Pavani	Member	
10.	Dr. N. Bujji Babu	Member	
11	Dr. A. Chandra leela	Member	07/8/2025
12.	Dr. Ch. Praveen	Member	
13.	Sri. V. Venkateswara Rao	Member	
14.	Sri. U.S.N. Prasad	Member	
15.	Dr. D. S. V. N. Ramamurthy	Member	
16.	M. S. S. V. Uma Gayathri	Member	M. Uma Gayathri
17.	D. Bhavya sri	Alumni member	D. Bhavya sri
18.	I. Jahnavi II B.Sc Pharma Chemistry (H)	Student member	I. Jahnavi
19.	G. Adi narayana II B.Sc Pharma Chemistry (H)	Student member	G. Adinarayana
20	I. S. Bhuvaneswari	Alumni Member	I. S. Bh

PITHAPUR RAJAH'S GOVERNMENT COLLEGE(A), KAKINADA

DEPARTMENT OF CHEMISTRY

BOS MEETING FOR BSc., PHARMACEUTICAL CHEMISTRY Dt.07-08-2025

The meeting of Board of studies in B.Sc Pharmaceutical Chemistry (Hons) is convened on 07-08-2025 2.30pm in offline and Online mode through Virtual Conference by Google Meet. V.Saanjeeva Kumar Chairman BOS, Dr.P.S.S. Saikiran, University Nominee, School of Pharmacy, Aditya University, Kakinada. Dr.Ch.S. Phani Kumar, Subject Expert School of Pharmacy, Aditya University, Kakinada, P. Karuna Raman, Industrialist, Ideal Organics, Hyderabad. I.S. Bhuvaneswari, Alumni , all faculty members of department of Chemistry and student representatives attended the meeting. The Board discussed the following Agenda Points and Resolved the subsequent Resolutions.

AGENDA

1. ATR on previous BoS Resolutions
2. Approval of Syllabus for Semester-I,II,(NEW MAJOR SYSTEM) & III. &IV (OLD MAJOR SYSTEM)
3. For NEW MAJOR SYSTEM All 15 Major courses in all 6 semesters , it is proposed to implement pharmaceutical chemistry 11 papers and 2 papers are from pharmaceutical chemistry accompanied with Micro-Biology and 2 papers are from pharmaceutical chemistry accompanied with Bio -Technology only. And 6 Minor subjects are to be taken from Chemistry. There fore in Semester -1 it is proposed to implement 2 papers in pharmaceutical chemistry out of 2 majors 2
4. Out of 2 Major courses in semester 2, it is proposed to implement 2 papers from pharmaceutical chemistry only .
5. For OLD MAJOR SYSTEM Out of 4 Major courses in semester 3, it is proposed to implement 2 papers in pharmaceutical chemistry and 2 papers in chemistry.
6. Out of 3 courses in semester 4, it is proposed to implement 2 papers in pharmaceutical chemistry and 1 papers from chemistry Major.
7. Continuous Internal assessment of each course comprises of 50 Marks out of which 25 marks for term examinations (Average of 2 midterm Examinations).Mid term examination.proposed to approve the Model Question paper for Mid term examination which comprises of two Long Answer Questions (LAQs) in which student has to attempt one LAQ which carries 10 marks and out of five Short Answer Questions (SAQs), student has to attempt three SAQs with 5 marks each.
8. As a part of CIA 10 Marks for project, 5 Marks for Student Seminar, 5 Marks for Assignments (5),3 Marks for Viva on theory and 2 Marks for Clean & Green and Attendance the same is implemented for the New Major system also.
9. List of Examiners & Paper setters (Minimum 20 members and at least 02 members from other states including Chemistry papers)

7) Syllabus for each course (both theory & Practical in case of Science subjects) followed by model question papers (theory & practical) and allocation of CIA (50marks) for each course with structure.

Plan for organizing Study / Industrial Tours to the following Organizations

I. Hetero Laboratories, Nakkapally /Dr. Reddy's Laboratories, Yanam./ CMS Laboratories

II. National Institute of Hydrology, Kakinada.

III. Plan for organizing subject oriented community outreach programs

IV. Online MOOCS course-1.

V. Any other program that enhances the learning capacity of students and their employable & knowledge skills.

8) Each student (2025-26 AB) has to complete one MOOCS course from SWAYAM in any subject per year.

Department activities Proposed for the academic year 2025-2026.

i) Proposed to Organize 1 National seminars/Workshop/ Conference (Mandatory for each Department) (Sep 25)

ii) Awareness on OZONE protection

iii) Guest lectures-2 (sep 25 , Dec 25)

iv) Training in water analysis (Nov 25)

v) National Chemistry Day (10-12-2025)

vi) National Science Day 2025 (28-02-2025)

Department of Chemistry B. Sc., Pharmaceutical Chemistry (Hons) Board of Studies

2025-26 Meeting dt.07-08-2025

RESOLUTIONS TO AGENDA ITEMS

1. **All resolutions are implemented in the previous BOS Meeting.**
2. **Approval of Syllabus for Semester-I,II,III &IV**

   Resolution: The Board unanimously approved the proposed syllabus for Semester--**I,II,III &IV** of B.Sc. Pharmaceutical Chemistry for implementation from the academic year 2025–26.
3. **Implementation of 2 Courses in Pharmaceutical Chemistry and 2 Courses in Chemistry in Semester I.**

   Resolution: The Board approved the proposed structure of having two courses in Pharmaceutical Chemistry in SEM-I .
4. **Implementation of 2 Courses in Pharmaceutical Chemistry and 2 Courses in Chemistry in Semester II**

   Resolution: The Board approved the proposed structure of having two courses in Pharmaceutical Chemistry in SEM-II
5. **Implementation of 2 Courses in Pharmaceutical Chemistry and 2 Courses in Chemistry in Semester III**

   Resolution: The Board approved the proposed structure of having two courses in Pharmaceutical Chemistry and two in general Chemistry in Semester III to ensure interdisciplinary and foundational strength.
6. **Implementation of 2 Courses in Pharmaceutical Chemistry and 1 Course in Chemistry in Semester IV**

   Resolution: The Board approved the proposed structure of having two courses in Pharmaceutical Chemistry and ONE in general Chemistry in Semester IV to ensure interdisciplinary and foundational strength.
7. **Approval of Continuous Internal Assessment (CIA) for Each Course (50 Marks Structure)**

   Resolution: The proposed CIA structure comprising 50 marks per course was approved. And Resolved to approve the Model Question paper for Mid term examination which comprises of two Long Answer Questions (LAQs) in which student has to attempt one LAQ which carries 10 marks and out of five Short Answer Questions (SAQs), student has to attempt three SAQs with 5 marks each.

- Term exams (average of two midterms): 25 marks
- Project: 10 marks

o Seminar: 5 marks
o Assignments (5): 5 marks
o Viva (theory): 3 marks
o Clean & Green + Attendance: 2 marks

8. **Approval of List of Examiners and Paper Setters (Minimum 20 Members, Including at Least 2 from Other States)**

Resolution: The Board approved the submitted list of examiners and paper setters with the recommendation to include a minimum of two members from institutions outside the state for greater academic diversity and quality.

9. **Approval of Syllabus Structure, Model Question Papers (Theory & Practical), and CIA for Each Course**

Resolution: The Board reviewed and approved the syllabus for each course along with practical components, model question papers (theory & practical), and CIA marks distribution for effective assessment and transparency.

10. **Mandatory Completion of One MOOC Course Per Year (SWAYAM) for 2025-26 Admitted Batch**

Resolution: The BoS approved the requirement for students to complete one online MOOC course (from SWAYAM or other UGC-approved platforms) per academic year to improve self-learning, digital literacy, and employability.

APPROVALS FOR PROPOSED DEPARTMENTAL ACTIVITIES (2025–26)

1. **Organizing National Seminars/Workshops/Conferences and Guest Lectures**

Resolution: The following academic events were approved to promote awareness and exposure:

- o Seminar/Workshop on Ozone Awareness
- o Celebrations for National Chemistry Day and National Science Day
- o Guest Lectures – Minimum 2 (Experts from Industry/Academia)
- o National-level Seminar in Chemistry
- o Skill-based Training Program in Water Analysis

2. **Industrial/Study Tours**

Resolution: The Board approved organizing industrial visits/study tours to:

- o Hetero Laboratories, Nakkapally / Dr. Reddy's Laboratories, Yanam /National Institute of Hydrology, Kakinada / CMS Laboratories Visakha Patnam.

3. **Community Outreach Programs**

Resolution: The proposal for organizing subject-oriented community outreach programs (such as health camps, awareness drives, rural education workshops) was accepted to strengthen social responsibility and student engagement.

4. **MOOC Course – Online (SWAYAM) – One Course per Student**

Resolution: Reinforced and approved as a compulsory academic requirement for all students from the 2025–26 batch onwards.

5. **Other Learning Enhancement Programs**

Resolution: The Board encouraged the implementation of additional skill-development programs, certificate courses, industrial training, soft skills workshops, and collaborative activities with placement cells to enhance employability and knowledge levels.

The Board appreciated the proactive initiatives of the Department of Chemistry in curriculum design, student engagement, and academic excellence. All agenda items were discussed and resolved positively.

PITHAPUR RAJAH'S GOVERNMENT COLLEGE (AUTONOMOUS), KAKINADA
KAKINADA 533 001-ANDHRA PRADESH
An AUTONOMOUS and NAAC Accredited Institution (B++ Grade- 2.82 CGPA)
(Affiliated to ADI KAVI NANNAYA UNIVERSITY, Rajamahendravarm.)

ACADEMIC CELL

(Certificate to be issued by the University Nomine/Subject Expert/Member of BOS)

Department Name: Chemistry

Name of the BOS Member : Dr. P. Saikiran

(University Nominee /Subject Expert/Industrialist / Member)

I certify that the syllabus submitted by the Pharmaceutical Chemistry Department is verified by me and I recommend the following suggestions:

1. Include Bio-Tech & MicroBiology Fundamentals in possible Courses/ as a separate course
2.
3. Offer Chemistry Subject as Minor.
4.
5.

The syllabus is approved with the above suggested modification

Signature with Date

Note: BOS Members are requested to fill the above details with necessary suggestions and send back to the Head of the department along with the syllabus

PITHAPUR RAJAH'S GOVERNMENT COLLEGE (AUTONOMOUS), KAKINADA
KAKINADA 533 001-ANDHRA PRADESH
An AUTONOMOUS and NAAC Accredited Institution (B++ Grade- 2.82 CGPA)
(Affiliated to ADI KAVI NANNAYA UNIVERSITY, Rajamahendravarm.)

ACADEMIC CELL

(Certificate to be issued by the University Nomine/Subject Expert/Member of BOS)

Department Name: Chemistry

Name of the BOS Member : Dr. Ch. S. Phanikumar

(University Nominee /Subject Expert/Industrialist / Member)

I certify that the syllabus submitted by the Pharmaceutical Chemistry Department is verified by me and I recommend the following suggestions:

1. Include MicroBiology & Bio Technology fundamentals courses in
2. Curriculam
3. Offer Chemistry Minor to pharma students so as to
4. Students Scope Increase for Vertical growth.
5.

The syllabus is approved with the above suggested modification

Signature with Date

Note: BOS Members are requested to fill the above details with necessary suggestions and send back to the Head of the department along with the syllabus

PITHAPUR RAJAH'S GOVERNMENT COLLEGE (A)
KAKINADA 533 001-ANDHRA PRADESH
An AUTONOMOUS and NAAC Accredited Institution (B++ Grade- 2.82 CGPA)
(Affiliated to ADI KAVI NANNAYA UNIVERSITY, Rajamahendravarm.)

ACADEMIC CELL

(Certificate to be issued by the University Nomine/Subject Expert/Member of BOS)

Department Name: Chemistry

Name of the BOS Member : Dr. Mary Nyoji Kumari

(University Nominee /Subject Expert/Industrialist / Member)

I certify that the syllabus submitted by the Chemistry Department is verified by me and I recommend the following suggestions:

1. Introduce Value Added Courses like Chemiformatics in collaboration with reputed institutes.
2. Encourage green lab practises.
3. Introduce Nano and Micro formulations in the syllabus
4.
5.

The syllabus is approved with the above suggested modification

7/8/2025
Signature with Date

Note: BOS Members are requested to fill the above details with necessary suggestions and send back to the Head of the department along with the syllabus

PITHAPUR RAJAH'S GOVERNMNET COLLEGE (A) :: KAKINADA

DEPARTMENT OF CHEMISTRY

BOARD OF STUDIES 2025-26

DATE: 07-08-2025

NEW COURSES

B.Sc., PHARMACEUTICAL CHEMISTRY

ACADEMIC YEAR	SEMESTER	PROGRAMME	COURSE NO	NAME OF THE COURSE INTRODUCED
2025-26	1	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:01	Pharmaceutics-I
2025-26	1	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:01-P	Pharmaceutics-I Practicals
2025-26	2	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:02	Health Education and Community Pharmacy
2025-26	2	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:02-P	Health Education and Community Pharmacy Practicals
2025-26	3	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:03	Pharmaceutics-II
2025-26	3	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:03-P	Pharmaceutics-II Practicals
2025-26	4	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:04	Pharma Regulatory Affairs
2025-26	4	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:04-P	Pharma Regulatory Affairs Practicals
2025-26	5	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:05	PHARMACEUTICS - II
2025-26	5	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:05-P	PHARMACEUTICS - II practicals
2025-26	6	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:06	PHARMA REGULATORY AFFAIRS
2025-26	6	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:06-P	PHARMA REGULATORY AFFAIRS Practicals
2025-26	7	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:07	FUNDAMENTALS INORGANIC CHEMISTRY
2025-26	7	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:07-P	FUNDAMENTALS INORGANIC CHEMISTRY practicals
2025-26	8	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:08	PHYSICAL CHEMISTRY

PITHAPUR RAJAH'S GOVERNMNET COLLEGE (A) :: KAKINADA

DEPARTMENT OF CHEMISTRY

BOARD OF STUDIES 2025-26

DATE: 07-08-2025

NEW COURSES

2025-26	8	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:08-P	PHYSICAL CHEMISTRY Practicals
2025-26	9	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:09	BASIC QC & QA
2025-26	9	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:09-P	BASIC QC & QA practicals
2025-26	10	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:10	PHARMACOLOGY
2025-26	10	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:10-P	PHARMACOLOGY Practicals
2025-26	11	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:11	SPECTROSCOPY
2025-26	11	B.Sc., PHARMACEUTICAL CHEMISTRY	PHCH:11-P	SPECTROSCOPY Practicals

Chairman BoS University Nominee Subject Expert Subject Expert

Members

Curriculum Framework of B.A/ B.Com/BBA(Honours) from the A.Y. 2025-26 Major+ Minor with CSP & VI Semester Internship				
1st Year - Semester I				
Sl.No	**Category**	**Course No**	**No. of Hours**	**No. of Credits**
1	Major – Pharmaceutics-I	I	4	4
2	Major -Health Education and Community Pharmacy	II	4	4
3	AECC-English	I	4	3
4	AECC-MIL (Telugu/Hindi/Sanskrit)	I	4	3
5	Multidisciplinary Course	0	0	0
6	Skill Enhancement Course (SEC) Introduction to Artificial Intelligence (Discipline Specific)	I	4+2 (Practice)	4
End of Semester I of 1st Year		**5**	**22**	**18**
1st Year - Semester II				
Sl.No	**Category**	**Course No**	**No. of Hours**	**No. of Credits**
1	Major – Pharmaceutics-II	III	4	4
2	Major - Pharma Regulatory Affairs	IV	4	4
3	AECC-English	II	4	3
4	AECC-MIL (Telugu/Hindi/Sanskrit)	II	4	3
5	Multidisciplinary Course	I	2	2
6	Skill Enhancement Course (SEC) Introduction to Artificial Intelligence (Discipline Specific)	II	4+2 (Practice)	4
7	Indian Knowledge System	I	2	0
8	Community Service Project(Minimum of 80 hours with 1 credit)			
End of Semester II of 1st Year		**7**	**26**	**21**

CURRICULAR FRAMEWORK B.Sc HONOURS FROM THE A.Y. 2025-26 (Major + Minor with CSP & VI Semester Internship)								
2nd Year - Semester III								
Sl. No	Category	Course No	No. of Hours		Total No.of Hours	No. of Credits		Total No. of Credits
			Theory	Practical		Theory	Practical	
1	Major – Pharmaceutics-II	V	3	2	5	3	1	4
2	Major – Pharma Regulatory affairs	VI	3	2	5	3	1	4
3	Major – Basics of organic chemistry	VII	3	2	5	3	1	4
4	Major- Physical chemistry	VIII	3	2	5	3	1	4
5	Minor-Plant and animal biotechnology	II	3	2	5	3	1	4
6	Multidisciplinary Course	III	2	0	2	2	0	2
7	Skill Enhancement Course (SEC) Design Thinking/Problem Solving / Others	IV	2	0	2	2	0	2
End of Semester III of 2nd Year		**7**	**19**	**10**	**29**	**19**	**5**	**24**

2nd Year - Semester IV								
Sl. No	Category	Course No	No. of Hours		Total No. of Hours	No. of Credits		Total No. of Credits
			Theory	Practical		Theory	Practical	
1	Major – Basic QA&QC	IX	3	2	5	3	1	4
2	Major – Pharmacology	X	3	2	5	3	1	4
3	Major – Spectroscopy	XI	3	2	5	3	1	4
4	Minor	III	3	2	5	3	1	4
5	Minor	IV	3	2	5	3	1	4
6	Multidisciplinary Course	IV	2	0	2	2	0	2
7	Skill Enhancement Course (SEC) Design Thinking/Problem Solving / Others	VI	2	0	2	2	0	2
End of Semester IV of 2nd Year		**7**	**19**	**10**	**29**	**19**	**5**	**24**

CIA structure for Single Major system (w.e.f 2024-25AB)

- Out of 50 marks for CIA, 25 marks are allocated for Mid examinations. In each semester two mid examinations will be conducted and the average of the two is considered.

- I mid examination is to be conducted in offline mode at college level and II mid examination is to be conducted in online mode at department level.

- I mid examination to be conducted in offline mode in which the student should attempt **one essay** question for ten marks out of two questions, **two short** answer questions with five marks each out of four questions and five objective questions with one mark each for each paper.

- Question paper is to be given as per the following structure for the courses with **5 units.**

Unit No	Long Answer Question(10M)	Short Answer Question (5 M)
I	1	1
II	1	1
III	1	1
IV	1	1
V	1	1
Any above Uniits	1	1
Any above Uniits	0	1
Any above Uniits	0	1
Note: The mid examinations if conduct in offline mode the above pattern is applicable. If anyone exam if conduct online then all the questions are given in the form of multiple choice, fill in the blanks, matching.		

Program Objectives:

To make student

1. Understand the basic concepts of Organic Chemistry
2. Acquire knowledge on qualitative and quantitative chemical analysis
3. Develop skills in the usage and application of laboratory instruments
4. Understand the mechanisms of various organic reactions
5. Acquire knowledge on various types of Pharmacopoeia.
6. Understand various forms of medicines and the role of additives In formulations
7. Acquire knowledge on different types of instrumentation techniques in chemical analysis.
8. Understand stereochemistry of carbon compounds its importance in organic chemistry
9. Acquire knowledge on the basic concepts of computers
10. Undergo industrial training and acquire skills in various instrumentation techniques.
11. Visit pharmaceutical industries and understand the functioning of plant,

Program Outcomes:

At the end of the course, the student will be able to

1. Acquire competence and skills in various techniques in chemical analysis.
2. Ready to get a suitable position or job role such as Quality Control Chemist, Quality Assurance Chemist, Production Chemist in a Pharmaceutical Industry.
3. Choose for an academic progression under vertical mobility for higher studies.
4. Eligible for various competitive examinations in various posts recruited by State and Central Governments.

Co-Curricular Activities and their Assessment Methods

	Study Project- 10M	Viva on theory- 3M	Assignment- 5M	Seminar- 5M	Clean & green and Attendance- 2M
Assessment Method	Assessment by the concerne faculty through Evaluation and Presentation	Assessment (Oral)by the concerned faculty	Assessment by the concerned faculty through Evaluation	Assessment by the concerned faculty through Lecture / Presentation	Minimum 75 % Attendance and Participation of Minimum in 2 Clean & Green Programs

PITHAPUR RAJAH'S GOVERNMENT COLLEGE(A), KAKINADA
DEPARTMENT OF CHEMISTRY
LIST OF PAPER SETTERS AND EXAMINARS FOR BSc., Pharmaceutical Chemistry

S.NO	Name of the Question paper setter by Valuation	Designation	Name of the College
1	Renuka	Assistant Professor Pharmaceutical Chemistry	Aditya University-Surampalem
2	N. Divya	Assistant Professor Pharmaceutical Chemistry	Aditya University-Surampalem
3	V.Prasana Sri	Assistant Professor Pharmaceutical Chemistry	Aditya University-Surampalem
4	S. Sravani Ratnam	Assistant Professor of Pharmaceutical Chemistry	V.J.S. College of Pharmacy
5	Sivakumar	Lecturer in Chemistry	GDC(A), Rajahmundry
6	Dr.B. Mallikarjuna	Lecturer in Chemistry	GDC(A), Rajahmundry
7	B. Venkatarao	Lecturer in Chemistry	GDC(A), Rajahmundry
8	S. Dilleswararao	Lecturer in Chemistry	GDC-TUNI
9	Dr.V.Ananthalakshmi	Lecturer in Chemistry	GDC-Pithapuram
10	K.Anand	Lecturer in Chemistry	GDC-Pithapuram
11	Dr.V.Narayana Raso	Lecturer in Chemistry	GDC-Perumal Puram
12	V.Mallikarjuna Sarma	Lecturer in Chemistry	GDC-Jaggampeta
13	Dr. Sai Krishna	Lecturer in Chemistry	V.S.Krishna College(A), Visakhapatnam
14	Dr.S. Ramakrishna	Lecturer in Chemistry	GDC(M), Srikakulam
15	Dr.M.Nygi Kurian	Lecturer in Chemistry	Bhavan's Vivekananda College,Secuderabad.

Vision and Mission – Department of Chemistry

Vision:

To empower and equip learners with comprehensive knowledge, advanced skills, and a strong research culture in emerging fields of chemistry, positioning them at the forefront of global scientific advancements. By integrating high-quality pedagogy, ethical values, and cutting-edge technology, we aim to create a transformative teaching-learning environment that enhances employability opportunities and prepares students for success in both academia and industry.

Our vision is to establish the Department of Chemistry as a centre of excellence, fostering a passion for chemistry in professional courses, and becoming a leading institution known for igniting curiosity, nurturing talent, and driving innovation. By creating a dynamic and inclusive academic community, we aim to inspire students to push the boundaries of knowledge and contribute meaningfully to the field of chemistry in both regional and global contexts.

Mission:

1. Innovative Teaching and Learning Practices.
2. Hands-on Experience and Practical Training.
3. Collaboration with Industry and Research Institutions
4. Community and Regional Development.
5. Research Excellence.
6. Holistic Development of Students.
7. Commitment to Sustainable Practices.

	P.R.GOVERNMENTCOLLEGE(A), KAKINADA	Program & Semester I B. Sc., Pharmaceutical chemistry SEM:1			
Course Code PHCH:01	**TITLE OF THE COURSE** **COURSE:1 PHARMACEUTICS - I**				
Teaching	Hours Allocated: (**Theory**)	L	T	P	C
Pre-requisites	fundamental knowledge on different conventional dosage forms.	40	10	30	4+1

Course Objectives:

Upon completion of this course the student should be able to:

- Know the types of dosage forms
- Understand the professional way of handling the prescription
- Preparation of various conventional dosage forms
- Packaging materials, their classification and functions

Course Outcomes:

On Completion of the course, the students will be able to	
CO1	Course is designed to impart a fundamental knowledge on the preparatory pharmacy with arts and science of preparing the different conventional dosage forms
CO2	Know the types of dosage forms.
CO3	Understand the professional way of handling the prescription
CO4	Preparation of various conventional dosage forms

SYLLABUS

UNIT–I

Pharmaceutical Terminology: Pharmacy, Pharmacology, Pharmacophore, Pharmacodynamics, Pharmacokinetics (ADME)

Nomenclature: Chemical name, Generic name and trade names with examples Classification: Classification based on structures and therapeutic activity with one example each.

UNIT-II

Pharmaceutical Dosage forms

Definition & classification with examples (based on routes of administration, on physical states and topical dosage forms). Additives or excipients & their importance in the dosage forms. Need for conversion of drugs into dosage forms.
Dosage forms: need for conversion drugs into medicines

UNIT-III

Solid Dosage forms-I(Tablets)

Definition- Types of Tablets with examples, Advantages of tablets. Essential qualities of a good tablet. Active Ingredients (Excipients) used in the formulation of tablets. Methods of manufacturing of tablets. Reasons for the use of granules in tablet preparation, Tablet coating , Evaluation and quality control tests for tablets: Appearance, uniformity of content, hardness, friability, weight uniformity, disintegration & dissolution. Manufacturing defects in Tablets.

UNIT-IV

Solid Dosage forms-II(Capsules)

Capsules- definition, types of capsules–Preparation, advantages and disadvantages of Hard Gelatin Capsules-Preparation, advantages and disadvantages of Soft Gelatin Capsules, packing and storage of capsules, special types of capsules, difficulties in filling the capsules, Evaluation and quality control tests for capsules

UNIT –V

Semi Solid Dosage Forms

Definition, Types of semi solid dosage forms, Characteristics of an ideal ointment, classification of ointments preparation of ointments-trituration method, fusion method, storage of ointments, evaluation tests of ointment

Packaging of Pharmaceuticals:

Characteristics of containers and closures-classification of containers–materials used for the construction of containers -Glass-Plastic-Metals-Paper-Materials used for the construction of closures- closure Liners-Aerosols-Introduction to aerosol packaging

TEXT BOOKS

1. Cooper & Gunns Dispensing Pharmacy, CBS, Publ. and Distributors New Delhi.
2. R.M Metha, Dispensing Pharmacy.
3. NK Jain and GD Guptha, Modern Dispensing Pharmacy, Pharma Med Press.
4. Sanmathi BS and Anshu Guptha, Dispensing Pharmacy – A Practical Manual, Pharma Med Press.
5. General Pharmacy by M.L.Schroff.
6. General Pharmacy by Cooper & Gunn.

REFERENCES

1. Lippincott Williams and Wilkins, Remington Pharmaceutical Sciences.
2. E.A. Rawlkins, Bentley's Text Book of Pharmaceutics, Elbs publ.
3. Hoover, Dispensing of Medication.

CO-POMapping:

(1:Slight[Low]; 2:Moderate [Medium]; 3:Substantial [High], '-':No Correlation)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	3	1	2	2	3	2	3	3
CO2	3	2	3	3	2	3	3	1	3	3	2	3	2
CO3	3	3	3	3	2	2	2	2	2	3	3	3	2
CO4	3	2	2	2	2	2	3	3	1	1	3	3	3
Avg.	**2.75**	**2.5**	**2.5**	**2.75**	**2.25**	**2.5**	**2.25**	**2**	**2**	**2.5**	2.5	3	2.5

PO1 : Knowledge in Pharmaceutical Chemistry : Apply the knowledge of different dosage forms and their routes of administration.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze simple to complex problems reaching substantiated conclusions using fundamental principles of pharmaceutical chemistry.

PO3: Design/development of solutions: Design solutions for simple to complex problems and designing novel routes for the synthesis of bioactive / active pharmaceutical ingredients.

PO4: Conduct investigations on new drug discoveries: Use fundamental research-based knowledge and available research methodologies including design of experiments, analysis and interpretation of data, and synthesis of the drug molecules.

PO5 : Modern tool usage: Create, select, and apply appropriate techniques, resources, and IT tools for drug modeling and interpretation of simple to complex drug molecules. PO6 : Society: Applying the contextual knowledge to assess societal, health, safety, legal issues.

PO7: Environment and sustainability: Understand the importance of synthetic drug chemistry for various discoveries in the field of health science and demonstrate the knowledge for sustainable development.

PO8 : Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the pharmaceutical manufacturing practice.

PO9 : Communication: Communicate effectively on issues related to pharmaceutical chemistry with the medical community, being able to write the effective reports and documentations and presentations.

PO10: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change and new drug investigations for new diseases.

PSO-1: To have a firm foundation in the fundamentals/concepts/theories and its applications in pharmaceutical chemistry.

PSO-2: To understand the structure and properties of drugs, Characteristics mechanisms of chemical reactions and their usage in pharmaceutical chemistry

PSO-3: To acquaint with safety measures that are to be taken in pharmaceutical chemistry laboratory and develop skills in proper manufacturing methods of pharmaceuticals and usage of different apparatus/instruments and carry out experimental procedures, record the observations and results and present the inference/conclusion

WEIGHTAGE TO CONTENT

S No.	Course Content	Essay (10M)	Short (5M)	Total marks	Question Relates as per Bloom's Taxonomy
1.	UNIT-I	1	2	20	Remembering, understanding
2.	UNIT-II	2	1	25	Analyzing, Remembering
3.	UNIT-III	1	2	20	Analyzing, Remembering
4.	UNIT-IV	1	1	15	Analyzing, Evaluating
5.	UNIT-V	1	1	15	Evaluating
	Total	6	7	95	

P.R.GOVERNMENT COLLEGE(A) KAKINADA

B.Sc.,PHARMACEUTICAL CHEMISTRY

PHARMACEUTICS - I

MODEL QUESTION PAPER

Time2hrs **Max.Marks-50**

SECTION-A

Answer any THREE questions choosing at least ONE question from each section 3x10=30M

1. One question is to be set from unit-I
2. One question is to be set from unit-II
3. One question is to be set from unit-II

SECTION-B

4. One question is to be set from unit-III
5. One question is to be set from unit-IV
6. One question is to be set from unit-V

Answer any FOUR questions **4x5=20M**

7. One question is to be set from unit-I
8. One question is to be set from unit-I
9. One question is to be set from unit-II
10. One question is to be set from unit-III
11. One question is to be set from unit-III
12. One question is to be set from unit-IV
13. One question is to be set from unit-V

P.R.GOVERNMENT COLLEGE(A) KAKINADA

B.Sc.,PHARMACEUTICAL CHEMISTRY

PHARMACEUTICS - I

QUESTION BANK

ESSAY QUESTIONS(10 MARKS)

UNIT:I

1.Explain ADME in pharmacokinetics.

2. Explain the classification of pharmaceutical dosage forms based on

a. Structure

b. Therapeutic activity

UNIT:II

1.What are additives? Write the role and importance in dosage forms.

2.Explain the classification of pharmaceutical dosage forms based on

i. Physical state

ii. Route of administration

UNIT:III

1.Write any two methods of preparation of tablets.

2.Define tablets and write different types of tablets.

3.Write about the active ingredients used in the formulation of the tablet

4.Explain manufacturing defects in tablets.

UNIT:IV

1.Explain the preparation of hard gelatin capsules.

2.Explain the preparation of soft gelatin capsules.

3. Explain the evaluation and quality control tests for capsules.

UNIT -V

1.Write the characteristics of containers and closers.

2.Write an essay on glass containers.

3.Explain an assay on plastic containers.

4. Explain different types of materials used in the construction of closers.

5.Explain the classification of ointments

6.Explain the preparation of ointments by the Trituration method.

7.Explain the preparation of ointments by Fusion method

SHORT ANSWER QUESTIONS

UNIT-I

1.Explain the terms pharmacy and pharmacology.

2.Explain Pharmacophore with two examples.

3.Explain chemical name, generic name and trade name with examples.

4.Explain about pharmacokinetics and pharmacodynamics.

UNIT–II

1.Define formulations. Write a note on topical dosage forms.

2.Explain the need for conversion of drugs into dosage forms

UNIT-III

1.Define tablets and write different types of tablets.

2.What are the advantages and essential qualities of tablet dosage forms.

3.Write about various coatings of tablets.

4.write a note on hardness, friability

5.Write a note on dissolution and disintegration

UNIT-IV

1.What are the advantages and disadvantages of soft gelatin capsules?

2.What are the advantages and disadvantages of hard gelatin capsules?

3.What are capsules? Write different types of capsules.

4.Write about the difficulties in filling the capsule.

UNIT-V

1.Write a note on metals used in the construction of containers.

2.Write a note on paper used in the construction of containers.

3.Explain the principle of aerosol containers.

4.Write the applications of aerosol packaging

P.R.GOVERNMENT COLLEGE(A) KAKINADA

B.Sc.,PHARMACEUTICAL CHEMISTRY

PHARMACEUTICS - I

PRACTICALS:

1.Formulation of the following dosage forms

Solutions: Aqueous iodine, paracetamol elixir,simple syrup

Ointments : simple ointment base , sulphur ointment

Dry powder: Effervescent powder, dusting powder

2. Demonstration of tablet manufacturing methods including all types of coated tablets

3. Demonstration of methods for evaluation of all types of tablets as per IP.

Component	Marks Allotted
Writing the Principle& Proceedure	**10 Marks**
Preparartion of Solutions	**5 Marks**
Calculation	**10 Marks**
Accuracy of Result	**15 Marks**
Record Submission	**5 Marks**
Viva Voce	**5 Marks**
Total	**50 Marks**

	P.R.GOVERNMENTCOLLEGE(A), KAKINADA	**Program & Semester** I B. Sc., Pharmaceutical chemistry SEM:1			
Course Code PHCH:02	TITLE OF THE COURSE COURSE:2 HEALTH EDUCATION AND COMMUNITY PHARMACY				
Teaching	Hours Allocated: (**Theory**)	L	T	P	C
Pre-requisites	To understand about health education and nutrition and pathophysiology of various diseases.	40	10	30	4+1

Course Objectives:

Upon completion of this course the student should be able to:

- Realization of current issues related to health and pharmaceutical problems within the country and world wide.
- Have a critical way of thinking based on current health care development
- Evaluate alternative ways of solving problems related to health and pharmaceutical issues.

Courseoutcomes:

On Completion of the course, the students will be able to	
CO1	Gain knowledge about different types of health and determinants of health
CO2	Apply the concept by learning about first aid treatment
CO3	Gain knowledge about communicable and non-communicable diseases
CO4	Understand the concept of sexually transmitted diseases and create awarenessamong the uneducated people

SYLLABUS

UNIT1

ConceptofHealth:

Definition of physical Health, mental Health, social Health, spiritual Health, determinants of health,indicators of health, concept of disease, natural history of diseases, disease causing agents, concept of prevention of diseases

UNIT:II

Nutrition and Health: Classification of foods, requirements, disease induced due to deficiency of proteins, vitamins and minerals –treatment and preventionDemography and family planning-Demography cycle, fertility, family planning, contraceptive methods,behavioral methods, natural family planning methods, chemical methods, mechanical methods,hormonal contraceptives.

UNIT:III

FirstAid: Emergency treatment in shock, snake bite, burns, poisoning, heart diseases, fractures and resuscitation methods .Elements of minor surgery and dressings

UNIT:IV

Communicable & Non communicable Diseases : Causative agents ,mode of transmission and preventionRespiratory infections. Chicken pox,whooping cough and TBIntestinal Infections- Hepatitis, cholera, Typhoid.

UNIT:V

Infections- Malaria, filarial, plague, dengue Surface infection- Rabies, Tetanus, Leprosy Sexually transmitted diseases : Syphilis ,Gonorrhea, AIDS

TEXT BOOKS

1. Health Education & Community Pharmacy — N. K. Jain
2. Health Education & Community Pharmacy — Dr. N. Murugesh
3. Hand Book of Health Education and Community Pharmacy — A. K. Gupta
4. Basics of Health Education and Community Pharmacy — Editors: Ramesh K. Goyal, Parloop A. Bhatt, Pradeep Kumar

REFERENCES

1. Community Pharmacy and Management — Dr. Anil Ahuja, Dr. Vishal M. Balaramnavar, Ms. Deepti Mathpal
2. Textbook of Community Pharmacy & Management (Diploma in Pharmacy, Course Code ER20-22T) — C. H. K. V. L. S. N. Anjana Male, Grandhi Surendra, Kanaka Durga Devi Nelluri, M. Ramakrishna Reddy
3. Community Pharmacy and Management (Bilingual D.Pharm 2nd Year) — Dr. Akash Ved, Dr. Rupali Amol Hande, Mr. Naveen Garg
4. Textbook of Community Pharmacy & Management — Harshavardhan B. Mishal, Rashmi H. Mishal, Hemant U. Chikhale

CO-POMapping:

(1:Slight[Low]; 2:Moderate [Medium]; 3:Substantial [High], '-':No Correlation)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
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CO2	3	2	3	3	2	3	3	1	3	3	2	3	2
CO3	3	3	3	3	2	2	2	2	2	3	3	3	2
CO4	3	2	2	2	2	2	3	3	1	1	3	3	3
Avg.	**2.75**	**2.5**	**2.5**	**2.75**	**2.25**	**2.5**	**2.25**	**2**	**2**	**2.5**	2.5	3	2.5

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WEIGHTAGE TO CONTENT

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1.	UNIT-I	1	2	20	Remembering, understanding
2.	UNIT-II	2	1	25	Analyzing, Remembering
3.	UNIT-III	1	2	20	Analyzing, Remembering
4.	UNIT-IV	1	1	15	Analyzing, Evaluating
5.	UNIT-V	1	1	15	Evaluating
	Total	6	7	95	

P.R.GOVERNMENT COLLEGE(A) KAKINADA

B.Sc.,PHARMACEUTICAL CHEMISTRY

HEALTH EDUCATION AND COMMUNITY PHARMACY

MODEL QUESTION PAPER

Time2hrs **Max.Marks-50**

SECTION-A

Answer any THREE questions choosing at least ONE question from each section **3x10=30M**

1. One question is to be set from unit-I
2. One question is to be set from unit-I
3. One question is to be set from unit-II
4. One question is to be set from unit-II
5. One question is to be set from unit-III
6. One question is to be set from unit-IV

SECTION-B

Answer any FOUR questions **4x5=20M**

7. One question is to be set from unit-I
8. One question is to be set from unit-I
9. One question is to be set from unit-II
10. One question is to be set from unit-II
11. One question is to be set from unit-III
12. One question is to be set from unit-III
13. One question is to be set from unit-IV

P.R.GOVERNMENT COLLEGE(A) KAKINADA

B.Sc.,PHARMACEUTICAL CHEMISTRY

HEALTH EDUCATION AND COMMUNITY PHARMACY

QUESTION BANK

ESSAY QUESTIONS(10 MARKS)

Unit-I

1. Explain the following.
i.Physical health
ii. Mental health
iii.Social health
iv. Spiritual health
2. Explain determinants of health.

3. Explain indicators of health.

Unit-II

1. Explain deficiency diseases, treatment and prevention of diseases due to the deficiency of water soluble vitamins.

2. Define family planning. Write about various types of contraceptive methods.

Unit-III

1. Define first aid. Describe emergency treatment in shock and snake bite.

2. Define first aid. Describe emergency treatment in burns and poisoning.

Unit-IV

1. Explain causative agents, mode of transmission and prevention of chicken pox and rabies.
2. Explain causative agents, mode of transmission and prevention of cholera and Hepatitis.

Unit-V

1.Explain causative agents ,mode of transmission and prevention of dengue and malaria.
2.. Explain causative agents ,mode of transmission and prevention of Syphilis and AIDS.

SHORTANSWERQUESTIONS(5M)

Unit-I

1. Describe briefly disease causing agents.
2. Write about the concept of prevention of diseases.

Unit-II

1. Write about classification of foods.
2. Write the diseases caused due to deficiency of proteins. Write the treatment and prevention for the deficiency of proteins.
3. Write a note on the demography cycle.

Unit-III

1. Describe emergency treatment for fractures.
2. Write a note on dressings.

Unit-IV

1. What are communicable and non communicable diseases ? Give examples.
2. Write about causative agents, mode of transmission and prevention of typhoid.
3. Write about causative agents ,mode of transmission and prevention of TB.

Unit-V

1. Write about causative agents, mode of transmission and prevention of malaria.
2. Write about causative agents ,mode of transmission and prevention of leprosy.

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PRACTICALS:

Study of pathophysiology of various infections

I. Respiratory

II. Intestinal

III. Bacterial

IV. Viral

Component	Marks Allotted
Writing the Principle& Proceedure	**10 Marks**
Preparartion of Solutions	**5 Marks**
Calculation	**10 Marks**
Accuracy of Result	**15 Marks**
Record Submission	**5 Marks**
Viva Voce	**5 Marks**
Total	**50 Marks**