SYLLABI FOR MASTER OF ENGINEERING IN CHEMICAL ENGINEERING WITH SPECIALIZATION IN ENVIRONMENTAL ENGINEERING EXAMINATIONS 2023-2025

MASTER OF ENGINEERING IN CHEMICAL ENGINEERING WITH SPECIALIZATION IN ENVIRONMENTAL ENGINEERING

SCHEME OF TEACHING AND EXAMINATION

Paper	Subject	Teaching Hrs. per Week	End Term	Mid Term	Total Marks

SYLLABI FOR MASTER OF ENGINEERING IN CHEMICAL ENGINEERING WITH SPECIALIZATION IN ENVIRONMENTAL ENGINEERING
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SCHEME OF TEACHING AND EXAMINATION (2021-2023)

Paper	Subject	Teaching Hrs. per Week	End Term	Mid Term	Total Marks
SECOND SEMESTER		L			
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EXAMINATIONS 2023-2025

SCHEME OF TEACHING AND EXAMINATION (2021-2023)

Paper	Subject	Teaching Hrs. per Week	End Term	Mid Term	Total Marks
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SYLLABI FOR MASTER OF ENGINEERING IN CHEMICAL ENGINEERING WITH SPECIALIZATION IN ENVIRONMENTAL ENGINEERING
EXAMINATIONS 2023-2025

FIRST SEMESTER

Paper Title: MATHEMATICAL METHODS IN CHEMICAL ENGINEERING (Theory)
Paper Code : CHE 1.1 Max. Marks 50 Credits : 4 Time: 3 hours

Note for the Examiner	**Question No. 1, which is compulsory, will cover the entire syllabus, having ten conceptual questions of one mark each or five questions of two marks each. Rest of the Questions (2 to 9) will be divided into FOUR Units having TWO questions each and candidate is required to attempt at least ONE question from each Unit. The duration of End Term exam will be 3 hrs.**
Course Objectives	

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Unit III

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THEORY	
Note for the Examiner	**Question No. 1, which is compulsory, will cover the entire syllabus, having ten conceptual questions of one mark each or five questions of two marks each. Rest of the Questions (2 to 9) will be divided into FOUR Units having TWO questions each and candidate is required to attempt at least ONE question from each Unit. The duration of End Term exam will be 3 hrs.**

UNIT I

Introduction of various separation techniques : d n on dz on n on L c n on

3. A y conc o c c odyn c nd o d o o w o d o

COURSE OUTCOMES: By nd o co d n o d o

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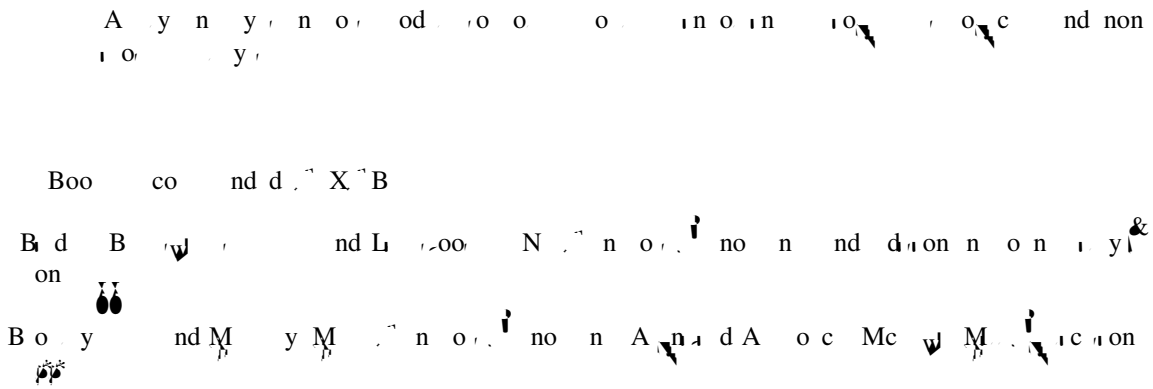

Paper Title: AIR POLLUTION CONTROL ENGINEERING (Theory)
Paper Code : CHE 1.6 Max. Marks 50 Credits : 4 Time: 3 hours
Course Duration: 45 Lectures of one hour each.
Note for the Examiner: Question No. 1, which is compulsory, will cover the entire syllabus, having ten conceptual questions of one mark each or five questions of two marks each. Rest of the Questions (2 to 9) will be divided into FOUR Units having TWO questions each and candidate is required to attempt at least ONE question from each Unit. The duration of End Term exam will be 3 hrs.

Unit I

Control Technologies

Air Pollution Meteorology A o c d on o o n n on
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Unit III

Automo ile Emission Control
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UNIT II

WaterTreatmentMethods

UNIT III

Sludge and solid wastes treatment

UNIT IV

AirPollutionControl:

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POLYMER CHEMISTRY & CHARACTERIZATION

Question No. 1, which is compulsory, will cover the entire syllabus, having ten conceptual questions of one mark each or five questions of two marks each. Rest

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***Books Recommended*:**

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ALTERNATE ENERGY TECHNOLOGY

Question No. 1, which is compulsory, will cover the entire syllabus, having ten conceptual questions of one mark each or five questions of two marks each. Rest of the Questions (2 to 9) will be divided into FOUR Units having TWO questions each and candidate is required to attempt at least ONE question from each Unit. The duration of End Term e4. HenniAt

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MACROMOLECULAR HYDRODYNAMICS

Question No. 1, which is compulsory, will cover the entire syllabus, having ten conceptual questions of one mark each or five questions of two marks each. Rest of the Questions (2 to 9) will be divided into FOUR Units having TWO questions each and candidate is required to attempt at least ONE question from each Unit. The duration of End Term exam will be 3 hrs.

Unit I

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be divided into FOUR Units having TWO questions each and candidate is required to attempt at least ONE question from each Unit. The duration of End Term exam will be 3 hrs.

UNIT-I

Dimensional Analysis B c n o y od o c n c nd dyn c y c n c o on d o c nd on
Differential Equations of fluid flow on n y on o on d n on nd d n on o on o n on o d n on o n n coo d n

UNIT-II

Flow of non viscous flows on o o on on nd n on o o n B no on oa y o n nd o on o n nd nc on o w o d n on nco o w o d n on o on o nd o n
Laminar flow of viscous fluids c o co y on o d n n dy n o o o n on n cy nd c coo d n oa y o n o o n c nd nn nd c on c o on o n n n nd oa y o n non o cond on

UNIT-III

Turbulent flow of viscous fluids nd n n o y yno d on o n co n o yno d c o y o nc n n y o nc c o nc n o nc o w n o nd n nc o o c nd o o n o nc
Turbulent flow in closed conduits nd o w o oa y d on o c nd n oa y d on on o n o n oo c on c o o nd oo on o nd y o c on c o nd yno d n

UNIT-IV

Flow of incompressible fluids past immersed bodies on n n o n on o nd y y on d od on o w o d n on o n o nd y y oc nd o d co a n n on o n o n o on

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PROCESS DYNAMICS AND CONTROL

Paper Code : CHE 2.4 Max. Marks 50 Credits : 4 Time: 3 hours

Course Duration: 45 Lectures of one hour each.

Note for the Paper setter: Question No. 1, which is compulsory, will cover the entire syllabus, having ten conceptual questions of one mark each or five questions of two marks each. Rest of the Questions (2 to 9) will be divided into FOUR Units having TWO questions each and candidate is required to attempt at least ONE question from each Unit. The duration of End Term5(U)-0.891nq 2(E34.35335( )c99(N)-0.89 1.891n)1.783.25(t)-4.35041( )-9 1.30

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Unit III

Environmental Impact Assessment

Treatment and disposal techniques:

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Books Recommended

o *Environmental Pollution Control Engineering* N n on

M L o n A *Introduction to environmentalEngg* Mc M nc

c o no o *Integrated Solid Waste Management Engineering Principle and Management* Mc M A

No *Sanitary Landfill Design Handbook* c no c o onn c c A

nd A o nd n *Solid Waste Engineering* B oo o o on L nn nc A

B c n *Basic Hazardous Waste Management* A

Ac y B nd n M *Hospital Waste Management* M n

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M. E. (CHEMICAL ENGINEERING)
THIRD SEMESTER

Paper Title: OPEN ELECTIVE(Theory)
Paper Code : CHE 3.1 Max. Marks 50 Credits : 4 Time: 3 hours
Course Duration: 45 Lectures of one hour each.
Note for the Paper setter: The question paper should be divided into Section A and Section B Total of 8 questions. 4 questions from section A and 4 questions from section B are to be set. The students will be required to attempt 5 questions selecting at least 2 from each section.

1. ANALYTICAL TECHNIQUES

SECTION-A

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Thermoanalytical methods nq c c on o od A n n on c o c n nd n y o d c on n y o d nd c on A nq n n on nd c on

SECTION-B

IR Spectroscopy n n d o o od on c o q o od nq od o on o o n o y o c o c n n on c on d n c on o o nc co o nd on o n d c

UV Vis Spectroscopy n od c on o o on o n o c y o n on c on d n c on o o nc co o nd n c o co o y

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Electron Microscopy n od c on o c on c o co y c ac on o c on c o co y od c nnn c on c o co y n n on nd c on c nnn nn n c o co y ng nd co on M
Atomic force microscopy AFM ng n n on nd c c on

***Books Recommended*:**

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2. PROJECT MANAGEMENT

SECTION-A

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3. OPTIMIZATION TECHNIQUES

SECTION-A

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SECTION-B

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***Books Recommended*:**

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4. SAFETY & HAZARDS

SECTION-A

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Paper Title: OPEN ELECTIVE(Theory)

Paper Code : CHE 3.1 **Max. Marks 50** **Credits : 4** **Time: 3 hours**

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Course Duration: 45 Lectures of one hour each.

Unit 1

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Chromatography

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Title	**PROJECT MANAGEMENT**			**Credits**	
Max.Marks	**End term 50**	**Mid-term 50**	**Practical --**	**Elective**	N
Pre requisites					
Course Objectives					
Course Outcomes					
Note for the Examiner	**Question No. 1, which is compulsory, will cover the entire syllabus, having ten conceptual questions of one mark each or five questions of two marks each. Rest of the Questions (2 to 9) will be divided into FOUR Units having TWO questions each and candidate is required to attempt at least ONE question from each Unit. The duration of End Term exam will be 3 hrs.**				

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Unit III

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Course Objectives: This course aims to equip students with the knowledge and skills to identify workplace hazards, assess risks, implement effective hazard controls, and promote safety in various industries. Students will understand toxic c5§)6.241(-)18- us

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EXAMINATIONS 2023-2025

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