DEPARTMENT OF CHEMICAL ENGINEERING
SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY
SURAT - 395 007 (GUJARAT) INDIA

Ref. No. DoChE/ 371 /2026-27 **19/11/2026**

B. Tech. IIIrd Year (Vth Semester)
Seminar CH-307, End Sem Examination-2026-27
Date & Time: December 07, 2026, 10:00 A.M. onwards

Sr. No.	Roll No.	Seminar Topic	Guide Name	Exam Panel
1	U24CH008	APPLICATION OF MOFS INCORPORATED MIXED MATRIX MEMBRANE IN NANOFILTRATION	ZVPM	ZVPM CMP TA2
2	U24CH022	MXENE BASED NANOCOMPOSITE MEMBRANE FOR WASTE WATER TREATMENT		
3	U24CH090	APPLICAION OF HYDROGELS IN SYNTHETIC MEMBRANE SEPARATIONS		
4	U24CH094	RARE EARTH MATERIAL RECOVERY BY SYNTHETIC MEMBRANE SEPARATION		
5	U24CH086	PRESSURE RETARDED OSMOSIS		
6	U24CH104	APPLICATION OF CAPACITIVE DEIONISATION IN WASTEWATER TREATMENT		
7	U24CH033	--	CMP	
8	U24CH039	--		
9	U24CH068	NANOFLUID COOLING FOR HIGH-DENSITY DATA CENTERS		
10	U24CH117	THERMAL MANAGEMENT OF LITHIUM-ION BATTERIES FOR ENHANCED PERFORMANCE AND SAFETY		
11	U24CH095	EXTRACTION AND PURIFICATION OF PHOSPHATIDYLCHOLINE FROM SOYABEAN		
12	U24CH113	NANOSTRUCTURED MATERIALS FOR NEXT-GENERATION LITHIUM-ION BATTERIES		
13	U24CH017	COMPARATIVE ANALYSIS OF IONIC LIQUIDS FOR CO2 CAPTURE AS A GREEN ALTERNATIVE TO CONVENTIONAL SOLVENTS	MC	MC AKJ TA1
14	U24CH050	THERMAL DESALINATION		
15	U24CH044	CARBON CREDIT TRADING IN CHEMICAL INDUSTRIES		
16	U24CH054	CHEMICAL RECYCLING OF PLASTIC WASTE		
17	U24CH120	LITHIUM IONS BATTERIES FOR SOLAR ENERGY STORAGE		
18	U24CH128	ADVANCED MATERIALS AND FABRICATION PROCESSES FOR NEXT GENERATION SOLAR CELLS		
19	U24CH006	INDUSTRIAL WASTE HEAT RECOVERY SYSTEM	AKJ	
20	U24CH041	PROCESS ANALYSIS OF CATALYTIC PYROLYSIS AND CO-PYROLYSIS PATHWAYS FOR WASTE-TO-ENERGY UPGRADING INTO DROP-IN HYDROCARBON BIOFUELS.		
21	U24CH043	PROCESS DESIGN AND ENERGY OPTIMIZATION OF VACUUM BATCH METHANOL–WATER DISTILLATION USING GENETIC ALGORITHM		
22	U24CH045	ACCELERATING MULTI-OBJECTIVE OPTIMIZATION OF CONTINUOUS METHANOL-WATER DISTILLATION VIA DATA-DRIVEN SURROGATE MODELING		
23	U24CH059	EFFECT OF OPERATING CONDITIONS AND REACTOR GEOMETRY ON HYDRODYNAMIC CAVITATION-ASSISTED BIODIESEL PRODUCTION		
24	U24CH062	EFFECT OF CATALYST COMPOSITION AND OPERATING CONDITIONS ON CO_2 HYDROGENATION TO METHANOL		

25	U24CH007	PRODUCTION OF AVIATION FUEL BY ALDOL CONDENSATION	JKP	JKP JVG VKR
26	U24CH024	CATALYTIC CONVERSION OF CELLULOSE TO 5-HYDROXYMETHYLFURFURAL		
27	U24CH021	CO_2 MINERALIZATION USING SWRO REJECT BRINE AND INDUSTRIAL ALKALINE WASTE		
28	U24CH058	CONVERSION OF CARBON DIOXIDE (CO2) INTO FORMIC ACID (HCOOH) VIA PAIRED ELECTROSYNTHESIS		
29	U24CH073	HYDROGEL AND INJECTABLE HYDROGEL FOR BIOMEDICAL APPLICATION		
30	U24CH099	LIGNIN AS UV SHIELDING MATERIAL		
31	U24CH011	SELECTION AND OPTIMIZATION OF PASSIVATORS FOR CARBON-BASED PEROVSKITE SOLAR CELLS	JVG	
32	U24CH065	SELECTION AND OPTIMIZATION OF PASSIVATORS FOR CARBON-BASED PEROVSKITE SOLAR CELLS		
33	U24CH026	EFFECT OF ANTIREFLECTIVE COATING ON SPECTRAL RESPONSE AND EFFICIENCY		
34	U24CH047	EFFECT OF ANTIREFLECTIVE COATING ON SPECTRAL RESPONSE AND EFFICIENCY		
35	U24CH103	INTEGRATION OF THIRD GENERATION SOLAR CELL WITH PRODUCTION OF GREEN HYDROGEN		
36	U24CH106	INTEGRATION OF THIRD GENERATION SOLAR CELL WITH PRODUCTION OF GREEN HYDROGEN		
37	U24CH020	ADSORPTIVE REMOVAL OF **TETRACYCLINE** FROM PHARMACEUTICAL WASTEWATER	VKR	
38	U24CH064	ADSORPTIVE REMOVAL OF **LEVOFLOXACIN** FROM PHARMACEUTICAL WASTEWATER		
39	U24CH063	GREEN SYNTHESIS OF AL-MOF USING PLANT EXTRACT		
40	U24CH092	GREEN SYNTHESIS OF MG-MOF USING PLANT EXTRACT		
41	U24CH074	PHOTOCHEMICAL REMOVAL OF **TETRACYCLINE** AS EMERGING CONTAMINANTS FROM WASTEWATER USING G-C_3N_4 PHOTOCATALYST.		
42	U24CH081	PHOTOCHEMICAL REMOVAL OF **CIPROFLOXACIN** AS EMERGING CONTAMINANTS FROM WASTEWATER USING G-C_3N_4 PHOTOCATALYST.		
43	U24CH112	--		
44	U24CH125	--		
45	U24CH023	PUMPING TECHNOLOGY AND DOSING PRECISION IN FLOW CHEMISTRY	MAD	MAD SG SKS
46	U24CH077	MICROCHANNEL FOR OIL ENRICHMENT		
47	U24CH037	MACHINE LEARNING-BASED BATCH QUALITY CLASSIFICATION, FAULT DIAGNOSIS AND PROCESS OPTIMIZATION OF PHARMACEUTICAL LIQUID FORMULATIONS		
48	U24CH038	IN-SILICO PREDICTION OF HERG CHANNEL CARDIOTOXICITY USING SCAFFOLD-SPLIT MACHINE LEARNING AND EXPLAINABLE AI		
49	U24CH084	NANO EMULSION BASED DRUG DELIVERY SYSTEMS FOR BRAIN TUMOR		
50	U24CH087	THERMODYNAMIC VS. KINETIC STABILITY IN SELF-NANOEMULSIFYING DRUG DELIVERY SYSTEMS (SNEDDS)		
51	U24CH013	NANOPARTICLE-ENHANCED LIQUID MEDIA FOR INTENSIFIED CO_2 ABSORPTION	SG	
52	U24CH048	ENGINEERING STRUCTURED MONOLITHIC CONTACTORS FOR ENHANCED CO_2 SEPARATION		
53	U24CH031	PROCESS INTENSIFICATION STRATEGIES FOR MITIGATING WAX DEPOSITION IN CRUDE OIL PIPELINES		
54	U24CH046	APPLICATION OF LEAN SIX SIGMA IN CHEMICAL ENGINEERING		
55	U24CH088	NANOEMULSIONS: SYNTHESIS, CHARACTERIZATION AND APPLICATION		

56	U24CH111	EXTRACTION AND CHARACTERIZATION OF ESSENTIAL OILS FROM PLANT RESINS		
57	U24CH069	A MULTIVARIATE MACHINE LEARNING FRAMEWORK FOR OPTIMAL CROP RECOMMENDATION	SKS	
58	U24CH110	IOT-BASED SOIL MOISTURE MONITORING AND AUTOMATED IRRIGATION		
59	U24CH070	ENZYMES IN DETERGENT FORMULATION AND PERFORMANCE ENHANCEMENT		
60	U24CH114	MICROBIAL PRODUCTION OF INDUSTRIAL ENZYMES AND PROCESS OPTIMISATION		
61	U24CH080	METAL OXIDE NANOMATERIALS IN CANCER IMAGING AND DIAGNOSTICS		
62	U24CH107	METAL OXIDE NANOPARTICLES IN DRUG DELIVERY SYSTEMS		
63	U24CH098	EXTRACTION AND RECOVERY OF VALUABLE BIOACTIVE COMPOUNDS FROM POMEGRANATE PEEL FOR MEDICAL APPLICATIONS		
64	U24CH108	EXTRACTION OF BIOACTIVE COMPOUNDS FROM GARLIC PEEL FOR COSMETIC APPLICATION		
65	**U23CH064**	--		
66	**U23CH071**	--		
67	U24CH002	SURFPRED-AUTOMATED SURFACTANT PROPERTY PREDICTION	VNL	VNL SRP JS
68	U24CH025	ENGINEERING MACHINE LEARNING FEATURES TO PREDICT CO2 AND N2 ADSORPTION IN METAL–ORGANIC FRAMEWORKS		
69	U24CH010	REINFORCEMENT LEARNING FOR MULTI-ZONE AERATION ENERGY MINIMIZATION AND EFFLUENT VIOLATION AVOIDANCE UNDER STORM-WEATHER DYNAMIC LOADS.		
70	U24CH052	GRAPH WAVELET NEURAL NETWORKS FOR SPATIAL-TEMPORAL EFFLUENT TOTAL NITROGEN AND CHEMICAL OXYGEN DEMAND (COD) PREDICTION IN ACTIVATED SLUDGE SYSTEMS.		
71	U24CH115	SURFACTANT ASSISTED WET ATTRITION MILLING FOR SCALABLE PRODUCTION AND SURFACE FUNCTIONALIZATION OF SILICA NANOPARTICLES.		
72	U24CH119	LOT-BASED SMART WATER QUALITY MONITORING AND NANO-FILTRATION SYSTEM		
73	U24CH001	CRYOGENIC FLARE GAS RECOVERY: A PATHWAY TO ZERO FLARING IN OIL AND GAS FACILITIES.	SRP	
74	U24CH061	ARTIFICIAL INTELLIGENCE IN CRYSTALLIZATION		
75	U24CH015	DESIGNING HYBRID POROUS SILICON–LIPID NANOPARTICLES (PSI-LNP) FOR DELIVERING TWO MEDICINES AT ONCE		
76	U24CH035	ULTRASOUND-ASSISTED CRYSTALLIZATION AND ITS ROLE IN PHARMACEUTICAL NANOPARTICLE PRODUCTION		
77	U24CH032	PROCESS SIMULATION PHARMACEUTICAL NANOPARTICLE PRODUCTION USING ANTISOLVENT PRECIPITATION		
78	U24CH126	ML BASED PREDICTION AND OPTIMIZATION IN THE PRODUCTION OF PHARMACEUTICAL NANOPARTICLES USING ANTISOLVENT PRECIPITATION		
79	U24CH014	DEVELOPMENT AND OPTIMIZATION OF WASTE-DERIVED ADSORBENTS FOR METHYLENE BLUE REMOVAL	JS	
80	U24CH042	MASS-TRANSFER AND HYDRODYNAMIC INTENSIFICATION IN PACKED COLUMNS: EFFECT OF PACKING CHARACTERISTICS AND FLOW CONDITIONS ON MASS TRANSFER AND PRESSURE DROP		
81	U24CH076	EFFECT OF MICROCHANNEL GEOMETRY ON MICRO - MIXING OF VISCOELASTIC POLYMER SOLUTIONS AT LOW REYNOLDS NUMBERS		
82	U24CH082	MICROCHANNEL HEAT SINKS FOR ELECTRONICS COOLING: HOT-SPOT MANAGEMENT AND TEMPERATURE		

		UNIFORMITY		
83	U24CH100	PROCESS INTENSIFICATION FOR AMOXICILLIN EXTRACTION IN MICRO-EXTRACTORS: HYDRODYNAMICS AND PARAMETRIC STUDY		
84	U24CH109	EXTRACTION OF AMOXICILLIN FROM AQUEOUS HOSPITAL WASTE IN MICRO EXTRACTOR		
85	U24CH129	MICRO HEAT EXCHANGER		
86	U24CH131	HEAT TRANSFER ENHANCEMENT THROUGH NANOPARTICLES.		
87	U24CH071	CHARACTERIZATION EQUIPMENTS FOR DYE EXTRACTION FROM TEXTILE WASTEWATER	AKM	AKM GCJ PPT
88	U24CH102	CLASSIFICATION OF DYES AND TREATMENT PROCESSES TO EXTRACT DYES FROM TEXTILE WASTEWATER		
89	U24CH075	REMOVAL OF HEAVY METALS FROM WASTEWATER USING MICELLAR ENHANCED ULTRAFILTRATION TECHNIQUE		
90	U24CH132	MODULAR MICROBIAL FUEL CELLS		
91	U24CH085	NUTRIENT CAPTURE, RECOVERY AND FERTILIZER VALUE FROM HUMAN URINE USING MODIFIED BIOCHAR		
92	U24CH089	REMOVAL OF ANTIBIOTICS FROM URINE VIA MODIFIED BIOCHARS		
93	U24CH027	CHEMICAL STRATEGIES TO MINIMIZE WAX DEPOSITION IN CRUDE OIL PIPELINES	GCJ	
94	U24CH036	HYBRID POROUS POLYMERIC COMPOSITE FOR SUPERCAPACITOR APPLICATION		
95	U24CH034	PROCESS FAILURE ANALYSIS AND PREDICTION IN GREEN EXTRACTION–ENCAPSULATION SYSTEMS		
96	U24CH049	PRODUCTION SCHEDULING OPTIMISATION IN BATCH AND MULTIPRODUCT CHEMICAL PLANTS		
97	U24CH066	ELECTROCHEMICAL CO_2 REDUCTION		
98	U24CH109	ROLE OF GRAPHENE-BASED NANOMATERIALS IN NEXTGENERATION WATER TREATMENT		
99	U24CH005	REMOVAL OF LEAD FROM WASTEWATER USING MXENE BASED NANOMATERIALS	PPT	
100	U24CH018	CAPTURING MERCURY FROM WASTEWATER		
101	U24CH040	MXENE APPLICATION FOR CO2 CAPTURE		
102	U24CH060	ADVANCED COOLANTS USING NANOFLUIDS FOR BOILER SYSTEMS		
103	U24CH078	PROCESS INTENSIFICATION OF PHOTOCATALYTIC WASTEWATER TREATMENT: PARAMETRIC AND KINETIC EVALUATION OF IMMOBILIZED G-C3N4 MICROREACTORS		
104	U24CH083	PROCESS INTENSIFICATIONS OF WASTE WATER REMEDIATION VIA AGRO WASTE DERIVED CARBON QUANTUM DOTS IN MICRO REACTOR		
105	U24CH091	BISMUSTH(III) OXIDE NANOSHEET FOR DRUG DELIVERY		
106	U24CH097	PREDICTING DRUG LOADING AND ENCAPSULATION EFFICIENCY IN NANOPARTICLES USING MACHINE LEARNING AND TEST FOR THE GENERALISABILITY OF MODEL		
107	U24CH012	USING MACHINE LEARNING TO PREDICT WATER FLUX IN FORWARD OSMOSIS	AAM	AAM SK TA3
108	U24CH016	MACHINE-LEARNING SURROGATE (DIGITAL TWIN) OF A MEMBRANE DISTILLATION SYSTEM FOR PREDICTING WATER RECOVERY FROM HUMAN URINE		
109	U24CH019	NANOFILTRATION LIKE FORWARD OSMOSIS MEMBRANES FOR COPPER REMOVAL		
110	U24CH056	ADVANCED MEMBRANE TECHNOLOGY FOR THE REMOVAL OF HEAVY METALS AND NITRATE USING LDH BASED NANOFILTERATION MEMBRANES		
111	U24CH072	3D PRINTING OF HYDROPHOBIC MEMBRANE FOR MEMBRANE DISTILLATION		

112	U24CH121	EXPERIMENTAL INVESTIGATION OF MEMBRANE FOULING IN FORWARD OSMOSIS USING SENSOR-ASSISTED MONITORING		
113	U24CH053	SMART MEMBRANE FOR GAS SEPARATION	SK	
114	U24CH057	SMART MEMBRANE FOR WATER TREATMENT		
115	U24CH093	CATALYTIC PYROLYSIS OF MIXED POLYOLEFIN PLASTIC WASTE FOR CIRCULAR HYDROCARBON MONOMER RECOVERY.		
116	U24CH096	BIOTRICKLING FILTERS FOR INDUSTRIAL VOLATILE ORGANIC COMPOUND (VOC) AND H2S ABATEMENT		
117	U24CH116	PROCESS ANALYSIS ON COMPRESSED BIOGAS (CBG)		
118	U24CH118	PERFORMANCE ANALYSIS ON COMPRESSED BIOGAS (CBG)		
119	U24CH003	SUSTAINABLE AVIATION FUEL	PAP	
120	U24CH004	PERFORMANCE EVALUATION AND OPTIMIZATION OF PEM WATER ELECTROLYSIS FOR GREEN HYDROGEN PRODUCTION		
121	U24CH079	ZEOLITE-BASED ADSORBENT DESIGN FOR CO_2 CAPTURE FROM INDUSTRIAL FLUE GAS		
122	U24CH122	XYLENE ISOMERIZATION MEMBRANE REACTORS		
123	U24CH123	DEHYDROGENATION OF PROPYLENE		
124	U24CH130	SEPARATION OF XYLENE		

TA1: DK, TA2: Monali, TA3: HC

19.11.26

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