Faculty of Technology

B. Tech. Petrochemical Technology

(R 2017) Semester – II

CY8281 ORGANIC CHEMISTRY LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Bunsen burners	30		
2.	LPG Cylinder in each row of the Laboratory	1		
3.	Hot Air Oven	2		
4.	Hot Plate	6		
5.	Water Bath	6		
6.	Deep freezer	1		
7.	Magnetic Stirrers	6		
8.	Mechanical Stirrers	6		
9.	Refluxion Set up	30		
10.	Sharp Knives to cut sodium	6		
11.	Rough balance	2		
12.	Four digit Balance	1		
13.	Melting Point apparatus	4		

Faculty of Technology

B. Tech. Petrochemical Technology

(R 2017) Semester – III

EE8361 ELECTRICAL ENGINEERING LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	DC Shunt motor	2		
2.	DC Series motor	1		
3.	DC shunt motor-DC Shunt Generator set	1		
4.	DC Shunt motor-DC Series Generator set	1		
5.	Single phase transformer	2		
6.	Three phase alternator	2		
7.	Three phase synchronous motor	1		
8.	Three phase Squirrel cage Induction motor	1		
9.	Three phase Slip ring Induction motor	1		

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(R 2017) Semester – III

ME8362 MECHANICAL ENGINEERING LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	I.C Engine – 2 stroke and 4 stroke model	1		
2.	4-stroke Diesel Engine with mechanical loading	1		
3.	Torsion cylinder Diesel Engine	1		
4.	Universal Tensile Testing machine with double 1 shear	1		
5.	Torsion Testing Machine (60 NM Capacity)	1		
6.	Impact Testing Machine (300 J Capacity)	1		
7.	Brinell Hardness Testing Machine	1		
8.	Rockwell Hardness Testing Machine	1		
9.	Spring Testing Machine for tensile and compressive loads (2500 N)	1		

Faculty of Technology

B. Tech. Petrochemical Technology

(R 2017) Semester – IV

PE8461 FLUIDS AND SOLID OPERATIONS LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Venturi meter	1		
2.	Orifice meter	1		
3.	Rotameter	1		
4.	Weir	1		
5.	Open drum with orifice	1		
6.	Pipes and fittings	1		
7.	Helical and spiral coils	1		
8.	Centrifugal pump	1		
9.	Packed column	1		
10.	Fluidized bed	1		
11.	Sieve shaker	1		
12.	Leaf filter	1		
13.	Plate and Frame Filter Press	1		
14.	Sedimentation Jar	1		

15.	Jaw Crusher	1		
16.	Ball Mill	1		
17.	Cyclone Separator	1		
18.	Roll Crusher	1		
19.	Elutriator	1		
20.	Drop Weight Crusher	1		
21.	Sieves	1		

B. Tech. Petrochemical Technology

(R 2017) Semester – IV

CH8281 CHEMICAL ANALYSIS LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Silica Crucible	20		
2.	Heating Mantle	3		
3.	Muffle Furnace	1		
4.	Hot air oven	1		
5.	Desiccator	5		
6.	Vacuum Pump	1		
7.	Condenser	10		
8.	Reflux Condenser	10		
9.	Pensky martens closed cup apparatus	1		
10.	Cleveland Open cup apparatus	1		
11.	Cloud point apparatus	1		
12.	Saybolt Viscometer	1		
13.	Redwood Viscometer	1		
14.	Bomb Calorimeter	1		

15.	COD reflux	1		
16.	Orsat apparatus	1		
17.	UV-Vis Spectrophotometer	1		

B. Tech. Petrochemical Technology

(R 2017) Semester – V

CH8561 HEAT TRANSFER LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Double Pipe Heat Exchanger	1		
2.	Shell and Tube heat exchanger	1		
3.	Bare and Finned Tube Heat Exchanger	1		
4.	Composite wall set up	1		
5.	Natural convection set up or Forced convection set up	1		
6.	Stefan Boltzmann Apparatus	1		
7.	Emissivity measurement set up	1		
8.	Open Pan Evaporator	1		
9.	Single effect evaporator or Multiple effect evaporator	1		
10.	Boiler	1		
11.	Packed Bed	1		
12.	Vertical Condenser or Horizontal Condenser	1		
13.	Helical Coil	1		
14.	Agitated Vessel	1		
15.	Jacketed vessel	1		

B. Tech. Petrochemical Technology

(R 2017) Semester – V

PM8561 PETROCHEMICAL ANALYSIS LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Bomb calorimeter	1		
2.	ORSAT apparatus	1		
3.	UV- Visible spectrophotometer	1		
4.	Gas Chromatography	1		
5.	Sulphur content determination instrument	1		
6.	NMR	1		
7.	Dynamic Viscometer	1		
8.	KF-Titrator	1		
9.	Refractometer	1		
10.	Laminar flow chamber	1		
11.	COD Incubator	1		
12.	BOD Incubator and shaker	1		
13.	Bacteriological chamber	1		
14.	Atomic absorption Spectrophotometer	1		

B. Tech. Petrochemical Technology

(R 2017) Semester – VI

CH8781 MASS TRANSFER LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Simple distillation setup	1		
2.	Steam distillation setup	1		
3.	Packed column	1		
4.	Liquid-liquid extractor	1		
5.	Vacuum Dryer	1		
6.	Tray dryer	1		
7.	Rotary dryer	1		
8.	Ion exchange column	1		
9.	Rotating disc contactor	1		
10.	Cooling tower	1		
11.	Absorption column	1		
12.	Surface evaporation set up	1		
13.	Adsorption column set up / Adsorption studies using conical flask	1		
14.	Leaching column set up / Leaching studies using conical flask	1		

B. Tech. Petrochemical Technology

(R 2017) Semester – VI

PE8661 PETROLEUM TESTING LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Redwood / Saybolt / Engler viscometer	1		
2.	Conradson Apparatus	1		
3.	Muffle furnace	1		
4.	Hydrometer	1		
5.	Aniline point apparatus	1		
6.	Copper corrosion Apparatus	1		
7.	Freezing / Cloud / Pour point apparatus	1		
8.	Junkers Gas Calorimeter / Bomb Calorimeter	1		
9.	Cleveland / PenskyMartien open and closed cup Flash and fire point Apparatus	1		
10.	API Distillation Apparatus	1		
11.	Abbey Refractometer	1		
12.	Dean and Stark apparatus	1		
13.	Karl –Fisher Apparatus	1		
14.	Softening point apparatus	1		
15.	Ductilometer	1		
16.	Penetrometer	1		

B. Tech. Petrochemical Technology

(R 2017) Semester – VII

PM8761 REACTION ENGINEERING AND PROCESS CONTROL LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	BATCH REACTOR	1		
2.	Plug flow reactor	1		
3.	CSTR	1		
4.	Sono-chemical reactor	1		
5.	Photochemical reactor	1		
6.	Packed bed reactor	1		