

General Engineering

I Year B.E. / B.Tech.
(Common for all branches)

(R 2017) Semester – I
GE8161 PROBLEM SOLVING AND PYTHON PROGRAMMING LABORATORY
Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Standalone desktops with Python (3 interpreter for Windows/Linux)	30		
2.	Server with Python (3 interpreter for Windows/Linux)	1		

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(R 2017) Semester – I
BS8161 PHYSICS & CHEMISTRY LABORATORY
Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Torsion pendulum	6		
2.	Young's modulus by non-uniform bending method	6		
3.	wavelength, and particle size using Laser, angle in an optical fiber	6		
4.	Thermal conductivity of bad conductor- Lee's Disc	6		
5.	Velocity of sound and compressibility of liquid-Ultrasonic interferometer	6		
6.	Wavelength mercury spectrum – spectrometer grating	6		
7.	band gap of a semiconductor	6		
8.	Thickness of a thin wire-Air wedge method	6		
9.	pH Meter	10		
10.	Conductivity Meter	10		
11.	Home Photometer	2		
12.	Potentiometer	10		
13.	Spectrophotometer	2		
14.	Viscometer	10		
15.	Electronic Balance	1		

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(R 2017) Semester – II
GE8261 ENGINEERING PRACTICES LABORATORY
Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	Assorted components for plumbing Consisting of metallic pipes, plastic pipes, flexible pipes, couplings, unions, elbows, plugs and other fittings.	15		
2.	Carpentry vice (fitted to work bench)	15		
3.	Standard woodworking tools	15		
4.	Models of industrial trusses, door joints, furniture joints	5		
5.	Power Tools: (a) Rotary Hammer	2		
	(b) Demolition Hammer	2		
	(c) Circular Saw	2		
	(d) Planer	2		
	(e) Hand Drilling Machine	2		
	(f) Jigsaw	2		
6.	Arc welding transformer with cables and holders	5		
7.	Welding booth with exhaust facility	5		
8.	Welding accessories like welding shield, chipping hammer, wire brush, etc.	5		

9.	Oxygen and acetylene gas cylinders, blow pipe and other welding outfit.	2		
10.	Centre lathe	2		
11.	Hearth furnace, anvil and smithy tools	2		
12.	Moulding table, foundry tools	2		
13.	Power Tool: Angle Grinder	2		
14.	Study-purpose items: centrifugal pump, air-conditioner	1		
15.	Assorted electrical components for house wiring	15		
16.	Electrical measuring instruments	10		
17.	Study purpose items: Iron box, fan and regulator, emergency lamp	1		
18.	Megger (250V/500V)	1		
19.	Power Tools: (a) Range Finder	2		
	(b) Digital Live-wire detector	2		
20.	Soldering guns	10		
21.	Assorted electronic components for making circuits	50		
22.	Small PCBs	10		
23.	Multi Meters	10		
24.	Study purpose items: Telephone, FM radio, low-voltage power supply	5		

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(R 2017) Semester – II BE8261 BASIC ELECTRICAL, ELECTRONICS AND INSTRUMENTATION ENGINEERING LABORATORY

Requirements for a batch of 30 students

Sl. No.	Description of Equipment	Quantity required (R)	Quantity available (A)	Deficiency (R - A)
1.	D. C. Motor Generator Set	2		
2.	D.C. Shunt Motor	2		
3.	Single Phase Transformer	2		
4.	Single Phase Induction Motor	2		
5.	Ammeter A.C and D.C	20		
6.	Voltmeters A.C and D.C	20		
7.	Watt meters LPF and UPF	4		
8.	Resistors & Breadboards	20		
9.	Cathode Ray Oscilloscopes	4		
10.	Dual Regulated power supplies	6		
11.	A.C. Signal Generators	4		
12.	Transistors (BJT, JFET)	20		

Note: This laboratory (BE8261) is applicable if the institution having the faculty of Mechanical Engineering related course(s) like Aero, Mech, Auto, etc.