



**DEENBANDHU CHHOTU RAM UNIVERSITY OF SCIENCE & TECHNOLOGY, MURTHAL,  
SONEPAT, HARYANA-131039**

**APPARATUS / SOFTWARES FOR B. Tech. 1<sup>st</sup> Year (All Branches)**

(As per B-Scheme applicable w.e.f. 2012)

	INFRASTRUCTURE	REQUIRED	AVAILABLE	DEFICIENCY
<b>List of Labs / Equipments / Softwares</b>				
S. No.	Name of Equipments / Softwares	Quantity		
1 <sup>st</sup> Year Lab: EG & D Lab, EP Lab-I, WP Lab, EC Lab, PEE Lab, CP Lab, EME Lab, EP Lab-II				
Name of the Lab: ME-103-B: Engineering Graphics & Drawing Lab				
1.	Drawing boards	One for each student		
Name of the Lab: PHY-103-B: Engineering Physics Lab-I				
2.	Wavelength of sodium light by using Newton's rings experiment setup	4		
3.	Wavelength of sodium light by Fresnel's bi-prism experiment. Setup	4		
4.	Wavelength of various colours of white light with the help of a plane transmission diffraction grating	4		
5.	Refractive index and Cauchy's constants of a prism by using spectrometer	4		
6.	Wavelength of sodium light by using Michelson interferometer	2		
7.	Resolving power of a telescope	4		
8.	Specific rotation of sugar solution by using a polarimeter	4		
9.	compare the capacitances of two capacitors by De'sauty bridge	4		
10.	Flashing and quenching potentials of Argon to find the capacitance of unknown capacitor	4		
11.	Photoconducting cell to verify the inverse square law	2		
12.	Temperature co-efficient of resistance by using platinum resistance thermometer and Callender and Griffith bridge	4		
13.	Frequency of A.C. mains by using sonometer	4		
14.	Velocity of ultrasonic waves in non-conducting medium by piezo-electric method	2		
15.	To determine the value of Stefan's constant	2		
16.	Coefficient of thermal conductivity of a good conductor using Searle's conductivity apparatus	2		
17.	Coefficient of thermal conductivity of a bad conductor by Lee and Charlton method	2		
Name of the Lab: ME-107-B: Workshop Practice Lab				
18.	Vernier calipers	1		
19.	Micrometer	1		

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20.	Vernier height gauge	1		
21.	Surface plate	1		
22.	Lathe machine	3		
23.	Shaper machine	2		
24.	Planner machine	1		
25.	Slotting machine	1		
26.	Welding machine & supporting equipments & tools	2 sets		
27.	Carpentary shop-marking tools, measuring tools, holding and supporting tools & other equipments required in carpentary shop	1 set		
28.	Foundary shop-pattern making tools, core and core boxes, foundary hand tools	1 set		
29.	Sheet metal shop-cutting tools, measuring tools, sheet shearing machine	1 set		
30.	Milling machine	1		
31.	Drilling machine	1		
32.	Fitting tools and marking tools	1		
33.	Forging shop with required tools	1 set		
34.	Butt welding and lap welding	1		
Name of the Lab: CH-103-B: Engineering Chemistry Lab				
35.	Digital Conductometer	10		
36.	Digital PH-meter	10		
37.	Water distillation unit	02		
38.	Vis-Spectrophotometer	02		
39.	Flame Photometer	02		
40.	Redwood Viscometer No.1&No.2	05 (each)		
41.	Pensky-Martens flash point apparatus	05		
42.	Abel's Closed Cup	05		
Name of the Lab: EE-103-B: Principles of Electrical Engineering Lab				
43.	Power Supply (0-30V, 2A) DC	08		
44.	Function Generator	02		
45.	Multimeter Digital	04		
46.	D.C. (MG set)	01		
47.	Transformer (1-Phase), 1 KVA	04		
48.	Bread board	08		
49.	Inductance Box	02		
50.	Resistance Box	02		
51.	Capacitance Box	02		
52.	Voltmeter AC & DC	08 each		
53.	Wattmeter (1-Phase)	04 number		
54.	Ampere meter (AC, DC)	08 each		
55.	Resistive / Inductive Load	01 number each		
56.	Variac (1-Phase, 15 A, 0-270 V)	02 number each		
57.	Different Meters (Tachometer, Energy meters insulation, earth tester & Phase sequence meter)	01 number each		
Name of the Lab: CSE-103-B: Computer Programming Lab				
58.	Desktop Computer	25		
59.	Turbo C Compiler	License per 25 users		
Name of the Lab: ME-109-B: Elements of Mech. Engineering Lab				
60.	Model of Cochran and Babcock & Wilcox boilers with mountings and accessories	1		
61.	Model of 2-stroke & 4-stroke diesel engines	1		

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62.	Model of 2-stroke & 4-stroke petrol engines	1		
63.	Single, double & triple start worm & worm wheel test rig	1		
64.	Single & double purchase winch crabs test rig	1		
65.	Simply supporting beam with concentrated loads	2		
66.	Screw jacks test rig	1		
67.	Cut section model of Pelton wheel	1		
68.	Universal testing machine	1		
Name of the Lab: PHY-104-B: Engineering Physics Lab-II				
69.	Low resistance by Carey - Foster's bridge	4		
70.	Resistance of a galvanometer by Thomson's constant deflection method using post office box	4		
71.	High resistances by Substitution method	4		
72.	Characteristics of a solar cell and to find the fill factor	4		
73.	e/m for electrons by Helical method	4		
74.	Variation of magnetic field with distance and to find the radius of coil by Stewart and Gee's apparatus	4		
75.	Planck's constant by using a photoelectric cell	4		
76.	Hall Co-efficient of semi-conductor	4		
77.	V-I characteristics of a p-n diode	2		
78.	Band gap of intrinsic semi-conductor using four probe method	3		
79.	Hysteresis loss by tracing a B-H curve	3		
80.	To verify the Truth Table of various Logic Gates	2		

Certified by the Director/Principal