

## ADP Scheme - 777

### (Package-4) Mechanical Technology, B-Tech

#### MATERIAL TESTING & METALLURGICAL LAB

S.No.	Name of Items	Specifications	For one college Qty	Unit Price (Both in Figures and words) Inclusive all taxes	Total Price (both in Figures and words) Inclusive all taxes
1)	UNIVERSAL TESTING MACHINE (UTM) Computerized.	<p>TECHNICAL SPECIFICATIONS:</p> <ul style="list-style-type: none"> <li>· Maximum tensile load : 1000 KN</li> <li>· Maximum compression load: 1000 KN</li> <li>· Distance between the jaws: 700 mm or more</li> <li>· Distance between the compression platens: 700 mm</li> <li>· Distance between the columns: 650 mm</li> <li>· Piston's stroke: 250 mm</li> <li>· Speed test: 100 mm/min</li> <li>· Precision and repeatability: <math>\pm</math> 1% of read value</li> <li>· Power supply: 230 V 1 ph 50 Hz 2.5 kW</li> <li>· Bending test pressed rolling distance 70 to 600 ,,</li> <li>· Shear test fitting with size of shearing specimen =0-20 mm</li> <li>· Grip for round and deformed (20-60 mm) and flat (40 mm thick x 80 mm wide ) samples.</li> </ul> <p>Extensometer.</p>	1		
2)	UNIVERSAL HARDNESS TESTER  SPECIFICATIONS EQUIVALENT TO:	Using load-cell technology, combined with automatic image analysis, LCD touch screen and built-in PC, covering the full Rockwell scale (Regular/Superficial) range (15, 30, 45, 60, 100 and 150kgf) as well as full load range of 1-250kgf, which also allows for full range macro Vickers testing (1-120kgf), as well as Brinell testing in the load range of 1-250kgf on the same machine	1		
3)	Metallurgical Microscope:	Optical system: color corrected infinity Optical system	1		

	Specifications equivalent to:	<p>Eyepieces: 10x120mm, with diopter adjustment</p> <p>Wide field binocular 30o[F.N. 20]</p> <p>Wide field trinocular 30o[F.N. 20]-light distribution 100:0/20:80</p> <p>Wide field trinocular 30o [F.N. 20]-light distribution 50:50 fixed erect image.</p> <p>Nose piece: Reversed quintuple</p> <p>Stage: 180x140mm surface;</p> <p>100x80mm Movement: coaxial controls</p> <p>Focus: Brass gears; Z-Axis movement; 30mm</p> <p>Fine focus: 2µm minimum increment</p> <p>Incident light: 12V/50W Halogen illuminator with external power supply</p> <p>Specimen thickness: Max 120mm</p>			
4)	Electrical comparator.  Specifications equivalent to:	<p>Base size: 150x180x50mm, steel fabricated powder coated.</p> <p>Stand: Dia. 25mm hardened ground and lapped chrome plated bar with height of 200mm fitted rigidly at right angles. A component of 100mm can be checked.</p> <p>Work Base: High chrome high carbon, hardened, ground and lapped block is attached to the base.</p> <p>Probe: Measuring range +/- 2.0 mm</p> <p>Counter: A single line Display</p> <p>-Counter unit is provided which displays Signal from probe in digital form. Resolution of this unit is Selectable - 0.0001 m.m, 0.001 m.m. Zero can be reset.</p> <p>Box: Complete unit is provided in a box</p>	1		
5)	Mechanical Comparator Specifications equivalent to:	<p>Base size: 150x180x50mm, steel fabricated powder coated.</p> <p>Stand: Dia 25mm hardened ground and lapped chrome plated bar with height of 200mm fitted rigidly at right angles. A component of 100mm can be checked.</p> <p>Work Base: High chrome high carbon, hardened, ground and lapped block is attached to the base. Dial Unit: A precision dial unit probe is provided with the unit with a Least count of 0.0005 m.m. , Range of +/-</p>	1		

		<p>0.25 m.m.          BOX : Complete unit is provided in a box.</p>			
<p>6)</p>	<p>Universal laboratory and heat treatment Furnace</p>	<p>Specifications :          Size of hearth:          Width : 300 mm (approx)          Height : 200 mm (approx)          Depth : 500 mm (approx)          Power ( heat) : Specify          3 Phase/ AC/50 Hz          Temperature control          1000-1300°C (in the chamber)          Coil shaped heating elements from KANTHAL A1 wire on ceramic support tubes. Heated from sidewalls          Automatic, temperature controller (manual/programmer operation)          Temperature measurement          1× sheathed control thermocouple, in ceramic protection tube          zero switching – Solid State Relay          Power control          Universal kiln for heat treatment of various materials up to 700-1300°C          metal hardening, annealing, tempering          ceramics firing          glass colors firing          suitable for laboratories          heated from sidewalls, uniform temperature field</p>	<p>1</p>		

7)	Specimen Cutting Machine	<p>Specifications equivalent to:          Equipped with double driving vises &amp; T-notch wide worktable and to clamp all kinds of strange shape work pieces          Super large and enclosed cutting chamber          Max. cutting diameter: Ø100 mm          Equipped with cooling liquid filtering system          Independent cutting illuminating system          The sink &amp; cutting room have been specially treated and will never be rusty          Power supply: three phases, 50 Hz/AC          Equipped with 40-60 liters Built-in cooling liquid tank          Cutting power: Specify          Sand wheel: Specify          Rotating speed: Specify</p>	1		
8)	<p>Specimen Polishing Machine</p> <p>Specifications equivalent to:</p>	<p>300mm diameter plate          High - torque motor          Variable speed ranges 50-600 rpm          Digital Timer 0-99 minutes          Electrical 220V-1Phase-50Hz          Accessories :          Set of specimen holding fixture          Set of lapping plates</p>	1		