



**OFFICE OF THE PRINCIPAL, UTKALMANI GOPABANDHU
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No. 495 /Date. 05/03/2026

QUOTATION CALL NOTICE

Sealed Quotations are invited from the reputed firms/ manufacture/ Authorized Distributer/Dealers for **Supply of Machinery & Equipment for Theory of Machines and Mechanism Lab** as per the specification attached in Annexure-I. The sealed quotations shall reach to the undersigned on or before 17.03.2026 at 11.00 AM positively. The same will be opened before the Purchase Committee of UGIE, Rourkela on the same date 17.03.2026 at 4.00 PM. The authority reserves the right to accept/ reject any part or all the quotations without assigning any reason thereof.

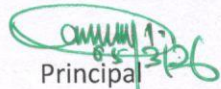
TERMS & CONDITIONS

1. The quotations must be submitted in sealed cover super scribing **“Quotation for Supply of Machinery & Equipment for Theory of Machines and Mechanism Lab”**
2. Rate must be mentioned indicating GST component separately.
3. Rate must be inclusive of GST, packing, forwarding, transportation, installation & demonstration.
4. Warranty: Minimum 12 months from date of installation.
5. Delivery period: Within 30 days from issue of Purchase Order.
6. Payment will be released after satisfactory installation & verification by purchase committee.
7. The authority reserves the right to cancel/reject any quotation without assigning any reason.
8. Incomplete or late quotations shall be rejected.
9. Firms who participated earlier may also participate again.

DOCUMENTS TO BE ATTACHED


- GST Registration (up to date)
- PAN Card
- Bank Details with Cancelled Cheque) (up to date)
- Authorization Certificate (if dealer)
- Past experience (preferable)
- Catalogue/Brochure of the Equipment

Encl: Annexure-I


Principal
UGIE Rourkela

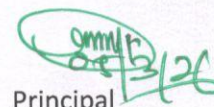
Memo No 496 /Dt 05/03/2026

Copy to Institute Notice Board/ website for information & wide publicity.


Principal
UGIE Rourkela

Memo No 497 /Dt 05/03/2026

Copy to the General Manager, RIC Rourkela/ ADM Rourkela/ Treasury Officer/ Sub-Collector Rourkela/ P.D., DRDA Sundargarh with a request to display of this quotation call notice in their Office notice board.


Principal
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Annexure-I

Theory of Machines and Mechanism Lab

Sl. No.	Product	Specifications
1.	Shaper Mechanism	<p>Key features</p> <ul style="list-style-type: none"> • Clearly illustrates crank and slotted lever/ Whitworth type quick return mechanism with visible color coded links (disc, crank, lever, ram and slider block). • Manual hand operated disc for low speed observation; option for small geared motor n drive for continuous demonstration in Laboratories and classrooms.
2.	Bicycle Wheel Sprocket Mechanism	<p>The Bicycle Wheel–Sprocket Mechanism is a compact mechanical assembly used to demonstrate the fundamentals of power transmission in bicycles. The unit consists of a rear wheel fitted with a multi-speed sprocket cassette, a chain drive, and a pedal-crank mechanism. When the rider (or motor attachment) rotates the crank, the sprocket transmits torque through the chain to drive the rear wheel.</p>
3.	Geneva Mechanism	<p>Components of a Geneva Model:</p> <ul style="list-style-type: none"> • Driving Wheel (Crank): Rotates continuously, features a pin (or roller) that engages the slots. • Driven Wheel (Geneva Wheel): Has several radial slots (e.g.,4) and a locking plate (circular disc). <p>Crank: A piece connecting the drive to the pin.</p>
4.	Eddy Current Dynamometer – Cut Section Model (Motorized)	<p>The apparatus is a working cut section model of an eddy current dynamometer mounted on a rigid MS frame with a motorized control column. The outer casing is cut open to expose the rotor, stator, field coils, shaft and bearings for clear visualization of internal construction. A compact control panel with on/off switch and emergency stop is provided for safe operation during demonstrations. The unit is ideal for explaining the principle, construction and operation of eddy current dynamometers used in engine and motor testing.</p> <p>Construction details</p> <ul style="list-style-type: none"> • Heavy duty eddy current dynamometer body mounted on base frame. • Longitudinal cut- section window with red border for clear internal view. • Rotor, stator, field coils and shaft clearly visible. • Control panel with illuminated on/off switch. <p>All wiring neatly routed and protected.</p>
5.	Determination of velocity and acceleration of Slider Crank Mechanism	<p>All components are assembled on a wooden base plate equipped with easy handling and stacking.</p> <p>TECHNICAL SPECIFICATIONS:</p> <ul style="list-style-type: none"> • Crank Disk: Made of plastic and mounted on ball bearings for smooth, low-friction rotation. • Connecting Rod: Constructed from aluminum for durability and light weight operation.

		Cylinder Stroke: Allows a stroke range
6.	Kleins' construction – Single Slider Crank Mechanism	<p>This experimental unit must demonstrate the motion conversion with either a fixed or an oscillating cylinder. It consists of a crank disk, a connecting rod, and a cylinder. One end of the connecting rod is attached to the crank disk via an adjustable crank. The crank radius can be set to three different positions by repositioning the crank on the disk.</p> <p>The opposite end of the connecting rod connects to the cylinder, representing the piston. By simply tightening a screw, the cylinder can be locked to prevent pivoting, allowing demonstration of both fixed-cylinder and oscillating-cylinder configurations.</p> <p>All components are securely mounted on a base plate, which features two handles for convenient carrying and stacking.</p>
7.	Cam Analysis Apparatus	<p>TECHNICAL SPECIFICATIONS:</p> <ul style="list-style-type: none"> • Motor-0.5 HP,1440 RPM,230 V AC (Single Phase) • Cam Profiles-Tangent, Eccentric, Circular, and Heart shaped cams • Followers-Roller, Knife-edge, and Flat-faced followers • Speed Control-Variable speed control via dimmer/ AC drive • Dial Gauge-For accurate displacement measurement • Follower Lift Indicator-Provided with graduated scale • Base Frame-Heavy-duty MS structure with accurate finish • Speed Sensor-Digital RPM counter <p>STANDARD ACCESSORIES:</p> <ul style="list-style-type: none"> • Set of cams and followers • Dial indicator with magnetic base • Graph Book Requires
8.	Belt Drive Model (open and cross)	<p>Belts Drives are the combination of pulleys according to their position and also their carrying or transmitting power from one pulley to another pulley.</p> <ul style="list-style-type: none"> • Single Stage Belt Drive (Open Belt Drive). • Single Stage Belt Drive (Cross Belt Drive).
9.	Internal Expanding Shoe Brake	<p>The model consists of a Internal Expanding Brake Assembly. Consisting of original parts used is necessary connections. The student can understand about the parts and the working of the Mechanical Drum Brake very easily. Completed with operating lever and mounted on heavy iron stand.</p> <ul style="list-style-type: none"> • Internal Expanding Brake Assembly will be mounted on suitable vertical stand. • Reconditioned basic assembly in good working condition. One Rear Drum assembly hand operated.
10.	Disc Brake	<p>TECHNICAL SPECIFICATION:</p> <ul style="list-style-type: none"> • Disc Brake Assembly (LMV type) mounted on a suitable vertical stand • The unit includes the following components: • Tandem Master Cylinder • Brake Oil Container (Reservoir) • Brake Pipe Line • Brake Pedal

		Hydraulic Operated Piston with Caliper Unit
11.	Single Plate Clutch Assembly for Assemble & Dismantle	<p>The setup features 4-wheeler clutch system (coil spring type), comprising essential components such as:</p> <ul style="list-style-type: none"> ✓ Flywheel ✓ Pressure Plate ✓ Clutch Disc ✓ Release Bearing ✓ Clutch Cable ✓ Foot Pedal ✓ Clutch Spring <p>Clutch Pedal</p>
12.	Diaphragm Clutch Assembly for Assemble & Dismantle	<p>Key Components Displayed:</p> <ul style="list-style-type: none"> ● Friction Plate (Clutch Disc)–Single plate with high-friction lining ● Pressure Plate–Mounted on the clutch cover to exert force on the clutch disc ● Diaphragm Spring–Conical (Belleville) spring type, clearly visible in cut section ● Release Bearing–Sectioned bearing demonstrates how axial force disengages the clutch ● Flywheel Interface–Simulated flywheel mount for complete clutch engagement system ● Input/output Shafts–Clearly demonstrate power transmission path ● Clutch Housing–Cut and painted to reveal internal components and construction layout ● Manual Demonstration Handle–For simulating clutch movement ● All parts are color-coded and mounted on a durable metal base plate with anti-corrosive paint.
13.	Governor Apparatus Motorized	<p>TECHNICAL SPECIFICATION:</p> <ul style="list-style-type: none"> ● Governor Types: Watt, Porter, Proell, and Hartnell governor assemblies (one each) ● Weights: Sliding weights for Porter & Proell; 2 sleeve weights for Load variation ● Governor Lift Measurement: Scale and pointer to measure vertical displacement (lift) ● Spring System: Two compression springs with different stiffness and adjustable preload (for Hartnell) ● Drive Speed–Variable speed electric motor with speed (0- 1500/3000 RPM) controlling unit ● Speed Sensor-Digital RPM with proximity sensor. ● Control Panel: Variac standard make ON/OFF, mains, indicator & fuse etc.
14.	Static & Dynamic Balancing Apparatus	<p>TECHNICAL SPECIFICATION:</p> <ul style="list-style-type: none"> ● Balancing Shaft-Precision steel shaft mounted on bearings ● Rotating Discs-4 Aluminum discs with radial slots for mass placement ● Balancing Weights-Set of calibrated masses with clamping screws ● Scale-Angular scale for setting phase difference