



భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్  
भारतीय प्रौद्योगिकी संस्थान हैदराबाद  
Indian Institute of Technology Hyderabad

## **INDICATIVE SYLLABUS AND SCHEME OF EXAM**

### **POST NO. 16.11.10-JUNIOR TECHNICIAN-MECHANICAL AND AEROSPACE ENGINEERING**

**Ref: Notification No. IITH/2024/NF/16 dated 19.10.2024.**

**1. Selection Process:** Selection Process consists of Written Test and Skill Test. Skill Test is qualifying in nature. There will be no weightage for skill test scores in final selection. Candidates must qualify in the skill test for consideration in final selection. Final Selection will be based on the performance in the Written Test.

#### **2. Syllabus for the skill test and written exam:**

- a. Differentiation, integration, differential equations, matrices, analytical geometry
- b. Electrical, mechanical and electronic measuring devices.
- c. Electrical and electronic components - capacitor, inductor, diode, BJT, MOSFET, OPAMP, INAMP, Regulators, etc.
- d. AC and DC power supplies.
- e. DC and AC circuit analysis and design of electronic components.
- f. Voltage, current and charge amplification and filtering.
- g. Transducers for pressure, distance, velocity, force, temperature and strain measurement.
- h. PLC; transformers; microcontrollers; PCB design, printing and assembly; circuit simulations; inverters,
- i. UPS and computer hardware troubleshooting.
- j. AC and DC drives and their control; data acquisition, control systems.

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