



भारतीय प्रौद्योगिकी संस्थान भुवनेश्वर
INDIAN INSTITUTE OF TECHNOLOGY BHUBANESWAR
(ACADEMIC SECTION)

F No. 14-25/2022/Minutes-56

कार्यालय आदेश सं./Office Order No. 306/2022, दिनांक/dated 18 November, 2022

The undersigned is directed to convey the resolution of Senate taken at its 56th Meeting held on 12th November, 2022, vide **Agenda Item:56.A.B.4** as follows:

Item:56.A.B.4	<p>To consider the subject list and syllabus for Q-Examinations, as received from different Schools (SES, SMS, SBS, SEOCS, SHSS&M, SMMM&E and SIF).</p> <p><i>[Background: The Senate in its 55th Meeting held on 13th June 2022 advised the Schools to frame the syllabus for the Q-Examinations.]</i></p> <p><i>[RPEC Recommendation: The RPEC thoroughly examined the subjects and syllabus for Q-Examinations, as submitted by different Schools and recommended to the Senate for consideration]</i></p> <p>After deliberation, the Senate approved the subject list and syllabus for Q-Examination recommended by RPEC except that the mandatory subject of Mathematics which is to be replaced by SHSSM by an appropriate subject on aptitude and reasoning. The revised list of all subjects are in Annexure C.</p>
----------------------	---

Encl: Annexure C

Asst. Registrar (Academics)

सेवा में/To

- 1) All Heads of the Schools
- 2) Ph.D Coordinator of all the Schools
- 3) Section Officer- PhD) — with a request to upload the approved Ph.D. Q-Exam Subjects list in the institute website in consultation with PIC- Web Service
- 4) PIC-Web Service for necessary action.
- 5) ERP Section for necessary action.

प्रतिलिपि/Copy to:

1. Chairman, Senate
2. All Members of the Senate
3. PS to Director
4. PS to Registrar
5. Office Order file

LIST OF SUBJECTS FOR Q-EXAMINATION (SCHOOLWISE)

Sl. No.	School	Branch/Discipline	Name of the Subject		
1	SES	Compulsory Mathematical Aptitude Subject: Mathematics			
		EE	Electric Circuits		
			Signals and Systems		
			Electric Machines		
			Control Systems		
			Power Electronics		
			Power Systems		
		ECE	Digital Electronics		
			Signals and Systems		
			Analog Electronics		
			Analog and Digital Communication		
			Electromagnetics		
			Semiconductor Devices		
		CSE	C Programming and Data Structure		
			Design & Analysis of Algorithms		
			Formal Language Automata Theory		
			Computer Organization and Architecture		
			Operating Systems		
			Computer Networks		
		2	SBS	Compulsory Mathematical Aptitude Subject: Mathematics for Chemists & Mathematics for Bilogists	
				Chemistry and BioSciences	Heterocyclic Chemistry
Spectroscopy for Chemist					
Fundamentals of Polymer Chemistry					
Supramolecular Chemistry					
Physical Methods in Chemistry					
Coordination Chemistry					
Bioinorganic Chemistry					
Nanochemistry and Technology					
Quantum Chemistry					
Chemical Kinetics					
Chemical Thermodyanamics					
Biochemistry					
Molecular Cell Biology					
Chemical Biology					
Mathematics for Chemists					
Mathematics for Bilogists					
A Concise History of Chemistry, Medicine, & Life Sciences in Ancient India					
Compulsory Mathematical Aptitude Subject : Mathematical Aptitude					
Mathematics	Real Analysis				
	Complex Analysis				
	Algebra				
	Linear Algebra				
	Discrete Mathematics				
	Functional Analysis				
	Topology				
	Ordinary and Partial Differential Equations				
	Probability and Statistics				
	Number Theory				

			Numerical Analysis
	Compulsory Mathematical Aptitude Subject : Mathematics aptitude for Physics		
	SBS	Physics	Fundamental Classical Mechanics
			Fundamental of Qantum Mechanics
			Basics of Detection and measurement of High energy particle and radiation
			Fundamental of Semiconductor devices
			Numerical Techniques
			Statistical Mechanics
			Solid State Physics
			Fundamentals of Atomic Physics
			Fundamentals of Magnetism and Supeconductivity
			Fundamentals of Classical Electrodynamics
			Material Characterization
			Optics and Laser
	Compulsory Mathematical Aptitude Subject : Mathematics and Statistics		
3	SEO&CS	Geology	Sedimentology
			Geochemistry
			Analytical Methods in Geosciences
		Atmosphere	Meteorology and Oceanography
			Fluid Dynamics in Earth System Sciences
			Concepts in Earth System Science
	Organic Geochemistry		
	Tropical Climate System		
	Physical Oceanography		
	Earth System Modelling		
Compulsory Mathematical Aptitude Subject : Quantitative Aptitude & Logical Reasoning			
4	HSS&M	Economics	Spatial Economics
			Nuroeconomics
			Labour Economics
			Experimental Economics
			Ecological Economics
			Ecological of Happiness
			Money Banking
			Economics of Natural Resource Conservation
			Climate Economics and Pllicy
			Enegy Economics
			Economics of Rural Development
			English
	Science Fiction		
	Indian Writings in English		
	Feminist Writings		
	Postmodern fiction		
	Contemporary Narrative Theory		
	Author/Thinker in Focus		
	Second Language Acquisition and Learning		
	English Language Testing		
	Reading in Scond Language		
	Psychology	Adcanced Cognitive Psychology	
		Cross-cultural Psychology	
Advanced Psychological Theories			
Health Psychology			

			Pavement Materials
			Pavement Design
		Water Resources Engineering	Groundwater Hydrology
			Surface Hydrology
			Open Channel Hydraulics