

# University of Petroleum and Energy Studies



## UPES PAT Exam Pattern

**Table-1**

<b>Parameters</b>	<b>Details</b>
<b>Exam Mode</b>	Online
<b>Language</b>	English
<b>Duration</b>	3 Hours
<b>Sections</b>	5 Sections (English Language and Comprehension, Biology, Physics, Chemistry, and Current Affairs)
<b>Type of Questions</b>	Multiple Choice Questions
<b>Total Number of Questions</b>	200 Questions
<b>Marking Scheme</b>	<ul style="list-style-type: none"><li>• 1 mark will be given for each correct answer</li><li>• There will be no negative marking</li></ul>

**Table-2**

<b>Sections</b>	<b>Total Questions</b>	<b>Marks</b>
Physics	50 Questions	50 Marks
Chemistry	50 Questions	50 Marks

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Biology	50 Questions	50 Marks
English language	30 Questions	30 Marks
Current affairs	20 Questions	20 Marks
<b>Total</b>	<b>200 Questions</b>	<b>200 Marks</b>

## UPES PAT Syllabus

### Biology

- Photosynthesis
- Carbon Cycle
- Nitrogen Cycle
- Difference Between Mitosis And Meiosis
- Flora And Fauna
- Human Digestive System
- Human Heart
- Sense Organs
- Cells
- Human Brain
- Blood and its Components
- Soil Profile
- Transpiration
- Gymnosperms
- Saprophytes
- Ecology
- Evolution
- Plant Cell
- Animal Cell
- Biomolecules

### Chemistry

- Matter and its state
- Atomic Structure

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- Chemical Bonding
- Periodic Classification of Element.
- Oxidation and Reduction
- Acids, Base, and Salts
- Behavior of Gases
- Electrolysis
- Carbon and its Compound
- Fuels
- Metallurgy
- Metals and Non-metals
- Chemical Reactions
- Radioactivity
- Electrochemistry
- Catalyst
- Hydrocarbons
- List of important Drugs and Chemicals
- Fertilizers
- Concepts of pH scale.

## English Language Comprehension

- Reading Comprehension
- Prepositions
- Homophones/Homonyms
- Sentence Correction Questions
- Sentence Rearrangement & Para jumbles
- Idioms And Phrases
- Subject-Verb Agreement
- Modals
- Reported Speech
- Active And Passive Voice
- Conjunctions
- Clauses
- One Word Substitutions
- Omission
- How to Write Articles
- Confusing Words
- Adjectives
- Synonyms and Antonyms

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- Letter Writing Format
- Spotting the Error
- Cloze Test
- List of Prepositions
- Poetic Devices
- Rules For Tenses
- Subject-Verb Agreement
- Parallelism
- Verb Forms
- Modifiers
- Grammatical Construction
- Diction

## **Physics**

- Units and Vectors
- Kinematics and Dynamics
- Centre of mass
- Friction
- Rotary motion
- Elasticity and Surface Tension
- Expansion and Thermodynamics
- Thermal radiation
- Sound
- Optics (Geo and Physical)
- Magnetism
- Electrostatics and Current electricity
- Atomic and Nuclear physics
- Semi-Conductors

## **Current Affairs**

- History, Geography
- Polity, Economics
- General Science, Science
- Ecology, Personalities
- National Events
- International Events