

AFCAT Syllabus 2024

Non-Technical Syllabus for AFCAT Exam

English Syllabus

Topics Covered in English Syllabus for AFCAT Exam	
Category	Topics
Vocabulary	Synonyms and Antonyms
	One-word Substitutions
	Idioms and Phrases
Grammar	Error Detection and Correction
	Sentence Completion
	Sentence Rearrangement
Comprehension	Reading Passages of Varying Lengths and Complexities
	Drawing Inferences and Making Deductions

Writing	Sentence Structure and Paragraph Organization
	Effective Use of Punctuation and Grammar

General Knowledge Syllabus

Topics Covered in General Knowledge for AFCAT Exam	
Subject Area	Topics
History	Ancient Indian history (Indus Valley Civilization, Mauryan Empire, Gupta Empire)
	Medieval Indian history (Delhi Sultanate, Mughal Empire)
	Modern Indian history (British Raj, Indian independence movement, post-independence India)
Geography	Physical geography of India (mountains, rivers, climate)
	Political geography of India (states, union territories, capital cities)
Sports	Popular sports in India (cricket, hockey, kabaddi)
	Major international sporting events (Olympics, FIFA World Cup)
	Sports terminology and rules

National & International Organizations	United Nations and its affiliated organizations
	International Monetary Fund (IMF), World Bank
	European Union (EU), African Union (AU)
Art & Culture	Indian classical music and dance
	Indian art forms (painting, sculpture, architecture)
	World art and culture (Renaissance art, Greek mythology)
Personalities	Eminent personalities in Indian history (Mahatma Gandhi, Jawaharlal Nehru, Rabindranath Tagore)
	Nobel laureates, internationally recognized figures
	Personalities from various fields (science, literature, sports)
Environment & Ecology	Environmental issues (climate change, pollution, deforestation)
	Environmental conservation efforts (national parks, wildlife sanctuaries)
	Ecological principles and concepts
Indian Polity	Indian Constitution and fundamental rights
	Indian government structure (Parliament, Judiciary, Executive)

	Indian political parties and their ideologies
Economy	Basic economic concepts (demand, supply, inflation)
	Indian economy growth and development
	Global economic issues (trade, globalization)
Basic Science Based Knowledge	Physics (mechanics, optics, electricity)
	Chemistry (elements, compounds, reactions)
	Biology (cells, plants, animals)
Science & Technology	Latest advancements in science and technology
	Space exploration and research
	Information technology and its applications
Current Affairs (National & International)	Recent national and international events
	Important policies and initiatives of the Indian government
	Global issues (conflicts, terrorism, economic crises)
Defense	Indian Armed Forces (Army, Navy, Air Force)

	Defense organizations (Defense Research and Development Organization – DRDO)
	Important Defense-related concepts (national security, border management)

Reasoning Syllabus

Topics Covered in Reasoning for AFCAT Exam	
Reasoning Topics	Description
Series	Identifying patterns or sequences in numbers, letters, or figures and determining the next element in the series.
Venn Diagram	Assessing the ability to represent relationships between sets using Venn diagrams, enabling the interpretation of logical relationships between sets and their elements.
Syllogism	Evaluating the ability to draw logical conclusions from given premises. Syllogisms involve statements that form a logical argument, and candidates must determine whether the conclusion follows logically from the given premises.
Blood Relation	Assessing the ability to understand and analyze relationships among family members. Blood relation problems require candidates to interpret and deduce relationships based on familial connections.

Non-Verbal Reasoning	Solving problems using visual information, such as patterns, shapes, and symbols. Non-verbal reasoning questions test a candidate's ability to perceive, analyze, and manipulate non-linguistic information.
Verbal Reasoning	Assessing the ability to comprehend and interpret verbal information, including analogies, vocabulary, and sentence completion.
Military Aptitude	Assessing a candidate's aptitude for military-related tasks and problem-solving. Military aptitude questions may involve map reading, coding-decoding, and tactical decision-making.

Quantitative Aptitude Syllabus

Topics Covered in Quantitative Aptitude for AFCAT Exam	
Mathematics Subtopic	Description
Decimal Fraction	Understanding and manipulating decimal numbers, including performing calculations, converting between fractions and decimals, and solving problems involving decimal fractions.
Time and Work	Assessing the ability to solve problems related to the relationship between time, work, and output.
Average/Percentage	Evaluating the ability to calculate and interpret averages and percentages.
Profit & Loss	Assessing the ability to calculate and analyze profit and loss in business transactions.

Ratio & Proportion	Evaluating the ability to understand and apply ratios and proportions.
Simple and Compound Interest	Assessing the ability to calculate and analyze simple and compound interest.
Time & Distance and Races	Evaluating the ability to solve problems involving time, distance, and speed in races, trains, boats, and streams.
Area and Perimeter	Assessing the ability to calculate the area and perimeter of various shapes, including squares, rectangles, triangles, circles, and other common geometric figures.
Probability	Evaluating the ability to understand and apply basic probability concepts.
Number System & Number Series	Assessing the ability to understand and manipulate numbers in various systems, including the decimal system, factors and multiples, and prime numbers.
Mixture & Allegation Rules	Evaluating the ability to solve problems involving mixtures.
Clocks	Assessing the ability to interpret and solve problems related to clocks.

Reasoning & Military Aptitude Syllabus

Topics Covered in Reasoning & Military Aptitude Syllabus

Verbal Reasoning Topics	Description
Series Completion	Identifying the next element in a given series of numbers, letters, or figures.
Coding-Decoding	Deciphering codes and encoding messages using given patterns or rules.
Analogy, Classification	Finding relationships between pairs of words or numbers and grouping similar items.
Blood Relations	Solving problems related to family relationships and deducing connections.
Puzzle Test	Solving complex puzzles involving logical thinking and pattern recognition.
Logical Venn Diagrams	Using Venn diagrams to represent and solve logical relationship problems.
Alphabet Test	Problems based on the positions and sequences of letters in the alphabet.
Ranking	Determining the rank or position of elements based on given conditions.
Time Sequence Test	Solving problems involving sequences of events and time-related information.

Non-Verbal Reasoning Topics Covered in Reasoning & Military Syllabus

Topics	Description
Series	Identifying patterns or sequences in visual figures and determining the next element.
Analogy	Finding relationships between pairs of visual figures.
Classification	Grouping visual figures based on common characteristics.
Mirror Images	Determining the mirror image of a given figure.
Water Images	Determining the water reflection of a given figure.
Embedded Figures	Identifying a figure hidden within a larger, more complex figure.
Completion of Incomplete Pattern	Completing a given pattern by identifying the missing element.
Figure Matrix	Solving problems involving matrices of figures based on given patterns or rules.
Paper Folding	Determining the result of folding a piece of paper and cutting it, then unfolding it.

Technical Syllabus

Topics Covered in Technical Syllabus for AFCAT Exam

Subject	Topics Covered	
General Engineering	Engineering	Engineering Mechanics
	Physics	Engineering Drawing
	Engineering Mathematics	
Aircraft Systems	Aircraft Structures	Flight Mechanics
	Material Science	Aerodynamics
	Propulsion	
Mechanical Engineering	Thermodynamics	Heat Transfer
	Manufacturing Technology Fluid Mechanics	Engineering Materials
Computer Science	Computer Networks	Data Structures
	Database Management Systems	Programming Languages

	Algorithms	
Electrical Engineering	Electrical Machines	Power Electronics
	Electronic Devices	Power Systems
	Control Systems	
Electronics	Analog and Digital	Electronic Devices and Circuits
	Electronics Communication	Microprocessors
Instrumentation	Measurement and Control Systems	Industrial Instrumentation
	Process Control	

Branch Wise Technical Syllabus

The AFCAT Exam syllabus for the Engineering Knowledge Test for AFCAT 2024 will include essential subjects relevant to the respective streams. It is crucial for candidates to understand and have a comprehensive list of topics within their chosen stream. This will enable candidates to formulate a strategic approach for the AFCAT 2023 examination. Explore the AFCAT syllabus for 2023 categorized by streams below:

EKT Computer Science Engineering Syllabus

Topics Covered in EKT Computer Science Engineering

Analog and Digital Electronics	Switching Theory
Information Technology	Electronic Devices
Computer Networks	Network Theory Design
Telecommunication Systems	Microwave Engineering
Antenna and Wave Propagation	Radar Theory
Instrumentation	Electrical Engineering
Control Engineering	

EKT Electronics Engineering Syllabus**Topics Covered in EKT Electronics Engineering**

Analog and Digital Electronics	Electrical Engineering
Instrumentation	Microwave Engineering
Antenna and Wave	Electronic Devices

Control Engineering	Telecommunication Systems
Propagation	Network Theory Design
Switching Theory	Information Technology
Computer Networks	

EKT Mechanical Engineering Syllabus

Topics Covered in EKT Mechanical Engineering	
Engineering Mechanics	Fluid Mechanics/ Hydraulic Machines
Thermodynamics	Aircraft Structures
Theory of Machines	Automotive Engineering
Power Plant Engineering	Industrial Engineering
Manufacturing Science	Materials Science

Flight Mechanics	Aerodynamics
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