AMCAT Modules and Syllabus

Provided below is the list of all the modules that you can take in AMCAT, the broad topics that a module would cover, relevant job profiles, number of questions, duration and some sample questions for each module.

Contents

ENGLISH COMPREHENSION (Verbal Reasoning)

The module evaluates written English skills and is aimed at determining the candidate"s ability to understand (a) the written text (b) the spoken word and (c) the ability to communicate effectively through written documents.

Befitting Job Functions/Profiles: This module will be relevant for almost all profiles such as Business Consulting, HR/Admin, iTeS/BPO, Marketing, Engineering, Sales and Customer Management, IT, Hotel Management, Life Sciences, Content Development, etc.

Number of Questions: 18

Module Duration: 18 min

Detailed Syllabus:

Vocabulary

- Synonyms
- Antonyms

Grammar

- Subject-Verb Agreement
- Tenses and Articles
- Prepositions and Conjunctions
- Speech and Voices

Comprehension

- Inferential and Literal Comprehension
- Contextual Vocabulary
- Comprehension ordering

LOGICAL REASONING

The module assesses capacity of an individual to interpret things objectively, to be able to perceive and interpret trends to make generalizations and be able to analyze assumptions behind an argument/statement.

Befitting Job Functions/Profiles: This module will be relevant for almost all profiles such as Content Development, Business Consulting, HR/Admin, iTeS/BPO, Marketing, Engineering, Sales and Customer Management, IT, Hotel Management, Life Sciences, etc.

Number of Questions: 12

Module Duration: 12 min

Detailed Syllabus:

Deductive Reasoning

- Coding deductive logic
- Directional sense, Blood relations
- Objective Reasoning
- Selection decision tables

- Puzzles

Inductive reasoning

- Coding pattern and Number series pattern recognition
- Analogy and Classification pattern recognition

Abductive Reasoning

- Logical word sequence
- Data sufficiency

QUANTITATIVE ABILITY

The module is ideal to evaluate the numerical ability of an individual and is available in both technical and non technicalflavor.

Befitting Job Functions/Profiles: This module will be relevant for almost all profiles such as Content Development, Business Consulting, HR/Admin, iTeS/BPO, Marketing, Engineering, Sales and Customer Management, IT, Hotel Management, Life Sciences, etc.

Number of Questions: 16

Module Duration: 16 min

Detailed Syllabus:

Basic Mathematics

- Divisibility
- HCF and LCM
- Numbers, decimal fractions and power

Applied Mathematics

- Profit and Loss
- Simple and Compound Interest
- Time, Speed and Distance

Engineering Mathematics

- Logarithms
- Permutation and Combinations
- Probability

COMPUTER PROGRAMMING:

The module is ideal to evaluate entry level talents exposure and expertise in Computer Programming. This module is agnostic to programming languages and does not require the candidates to code during the test.

Befitting Job Functions/Profiles: Technical Support Executive, Computer Engineer, Software Developer Web, System s/w, Product, Trainee, Testing Engineer, Research

Engineer, Content Developer-IT, IT Recruiter, etc.

Number of Questions: 25

Module Duration: 35 min

Detailed Syllabus:

Basic Programming

- Data Types
- Iteration, Recursion, Decision
- Procedure, functions and scope

Data Structures

- Arrays, Linked Lists, Trees, Graphs
- Stacks, Queues
- Hash Tables
- Heaps

OOPs

- Polymorphism
- Abstraction
- Encapsulation

Miscellaneous

- Searching and Sorting
- Complexity Theory

AUTOMATA FIX (DEBUGGING)

7 Questions – 20 Mins Duration

In this module, the candidate has to fix logical/syntax error of the code or complete the given code by reusing existing functions.

Befitting Job Functions/Profiles: Full Stack Developer, Game Developer, Game Programmer, Mobile App Developer, Embedded Software Engineer, Software Architect, Software Developer, Computer and Information Research Scientist, Back End Developer, Software Quality Assurance Engineer.

Detailed Syllabus:

- Basic programming
- Control Structures
- conditional statements
- Linear data structures

- Advanced data structures
- Sorting and searching algorithms

Question Type	Description
Logical	The candidate is required to fix all logical errors in the given code. This checks the various logical concepts like conditions, looping etc
Compilation	Candidate needs to correct the syntax of the given code without changing its logic. This checks the candidate basic knowledge of syntax and language specific concepts.
Code reuse	Candidate needs to complete the given code by reusing existing functions. This is a bit tougher than the logical and compilation based questions. The candidate is required to complete the code using the predefined structure or functions.

AUTOMATA:

2 Questions – 45 Mins duration

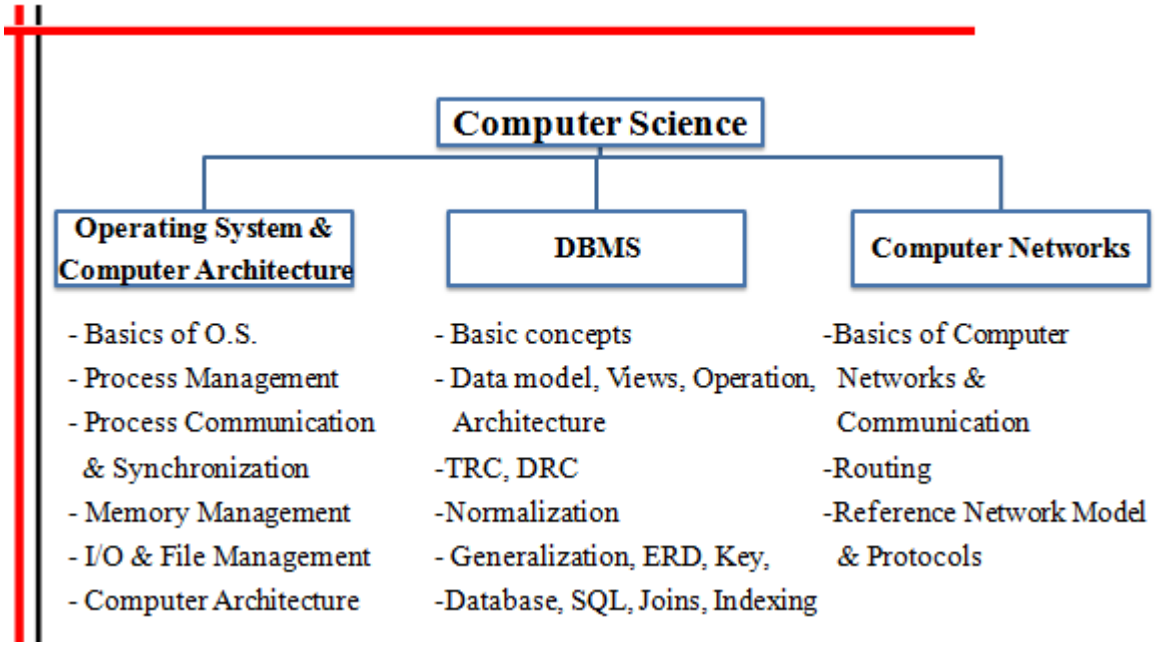
Data Structure Concepts	
Array and Matrices	1D array
	Array Rotations
	Arrangement and rearrangement of elements of array
	Properties of matrices
	Inverting matrices
	Transpose of the matrix
Linked list	Basic operations on linked list
	Circular linked list
String processing and manipulation	Basic string operations
	Pattern searching
Stack/Queue	Basic stack operations
	Basic queue operations
Sorting and Searching	linear and binary search
	various sorting concepts
Advanced Design and Analysis Techniques	
Greedy Algorithms	activity-selection problem
	fractional knapsack
Minimum Spanning Trees	Kruskal
	Prim

String Matching	The naive string-matching algorithm
Divide and Conquer	Sorting algorithms
	Binary Search
Computational Geometry	Line-segment properties
	Intersection of line segment

COMPUTER SCIENCE

The Computer Science assessment module has been designed to assess the candidate's knowledge in basics of Operating System and Computer Architecture, Computer Networks and Database concepts. A wide variety of conceptual, output-based, numerical and application based questions on the above mentioned topics will assess the candidate's theoretical and practical knowledge and his/her comfort level in these widely used concepts.

The Software companies which hire software developers, database administrator and network engineers, use this module to evaluate and screen the applicants.


Computer Science
Operating System & Computer Architecture
DBMS
Computer Networks
- Basics of O.S.
- Process Management
- Process Communication & Synchronization
- Memory Management
- I/O & File Management
- Computer Architecture
- Basic concepts
- Data model, Views, Operation, Architecture
-TRC, DRC
-Normalization
- Generalization, ERD, Key,
-Database, SQL, Joins, Indexing
-Basics of Computer Networks & Communication
-Routing
-Reference Network Model & Protocols