



# Roma Tre

## CONCORSO AM3F-TECINF24

PROVA 1

NON ESTRATTA

### Quesito 1

Il candidato descriva il processo di aggiornamento annuale della Scheda SUA-CdS, indicando gli attori coinvolti e le principali criticità che possono emergere.

### Quesito 2

Il candidato descriva le principali funzioni del Consiglio di Amministrazione dell'Università degli Studi Roma Tre

### Quesito 3

Leggere e tradurre il seguente testo

Structured Query Language (SQL) is a domain-specific language used to manage data, especially in a relational database management system (RDBMS). It is particularly useful in handling structured data, i.e., data incorporating relations among entities and variables.

Introduced in the 1970s, SQL offered two main advantages over older read-write APIs such as ISAM or VSAM. Firstly, it introduced the concept of accessing many records with one single command. Secondly, it eliminates the need to specify how to reach a record, i.e., with or without an index.

Originally based upon relational algebra and tuple relational calculus, SQL consists of many types of statements,[6] which may be informally classed as sublanguages, commonly: data query language (DQL), data definition language (DDL), data control language (DCL), and data manipulation language



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PROVA 2

NON ESTRATTA

### Quesito 1

Nel contesto del sistema AVA, il candidato illustri il ruolo della Commissione Paritetica Docenti-Studenti (CPDS). In che modo il contributo della CPDS incide sulla qualità percepita del Corso di Studio e sul miglioramento continuo dell'offerta formativa

### Quesito 2

Il candidato descriva le principali funzioni del Senato Accademico dell'Università degli Studi Roma Tre

### Quesito 3

Leggere e tradurre il seguente testo

SQL became a standard of the American National Standards Institute (ANSI) in 1986 and of the International Organization for Standardization (ISO) in 1987. Since then, the standard has been revised multiple times to include a larger set of features and incorporate common extensions. Despite the existence of standards, virtually no implementations in existence adhere to it fully, and most SQL code requires at least some changes before being ported to different database systems.



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### PROVA 3

#### Quesito 1

Il candidato descriva le modalità con cui le basi di dati supportano l'integrità dei dati. Descriva i vincoli principali (chiavi primarie, esterne, univocità, ecc.) e il loro utilizzo.

#### Quesito 2

Il candidato descriva il ruolo del Rettore all'interno di università.

#### Quesito 3

Leggere e tradurre il seguente testo

SQL was initially developed at IBM by Donald D. Chamberlin and Raymond F. Boyce after learning about the relational model from Edgar F. Codd in the early 1970s. This version, initially called SEQUEL (Structured English Query Language), was designed to manipulate and retrieve data stored in IBM's original database management system, System R, which a group at IBM San Jose Research Laboratory had developed during the 1970s

Chamberlin and Boyce's first attempt at a relational database language was SQUARE (Specifying Queries in A Relational Environment), but it was difficult to use due to subscript/superscript notation. After moving to the San Jose Research Laboratory in 1973, they began work on a sequel to SQUARE. The original name SEQUEL, which is widely regarded as a pun on QUEL, the query language of Ingres, was later changed to SQL (dropping the vowels) because "SEQUEL" was a trademark of the UK-based Hawker Siddeley Dynamics Engineering Limited company. The label SQL later became the acronym for Structured Query Language.



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## CONCORSO AM3F-TECINF24

### PROVA 4

#### Quesito 1

Il candidato illustri quali sono le principali differenze tra un database relazionale e un database non relazionale. In quali casi è preferibile l'uno rispetto all'altro?

#### Quesito 2

Il candidato descriva il ruolo del Direttore Generale all'interno di università

#### Quesito 3

Leggere e tradurre il seguente testo

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## CONCORSO AM3F-TECINF24

### PROVA 5

#### Quesito 1

Il candidato descriva come il testing contribuisce alla qualità di un sistema informatico. Descriva le principali tipologie di test e il loro ruolo nel ciclo di sviluppo

#### Quesito 2

Il candidato descriva il ruolo Collegio dei Direttori di Dipartimento all'interno di università degli studi Roma Tre

#### Quesito 3

Leggere e tradurre il seguente testo

SQL implementations are incompatible between vendors and do not necessarily completely follow standards. In particular, date and time syntax, string concatenation, NULLs, and comparison case sensitivity vary from vendor to vendor. PostgreSQL and Mimer SQL strive for standards compliance, though PostgreSQL does not adhere to the standard in all cases. For example, the folding of unquoted names to lower case in PostgreSQL is incompatible with the SQL standard,[22] which says that unquoted names should be folded to upper case. Thus, according to the standard, Foo should be equivalent to FOO, not foo.

Popular implementations of SQL commonly omit support for basic features of Standard SQL, such as the DATE or TIME data types. The most obvious such examples, and incidentally the most popular commercial and proprietary SQL DBMSs, are Oracle (whose DATE behaves as DATETIME, and lacks a TIME type) and MS SQL Server (before the 2008 version). As a result, SQL code can rarely be ported between database systems without modifications.