



Final Assessment for Foundation

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Final Assessment for Foundation Track

Question 1

1/1 point (ungraded)

Which of the following statements about primary keys and foreign keys in SQL is correct

- ☐ A primary key is used to establish a relationship between two tables.
- ☒ A foreign key ensures referential integrity between related tables.
- ☐ A foreign key is a column or set of columns that uniquely identifies a row in a table.
- ☐ A foreign key is a column or set of columns that uniquely identifies a row in a table.



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 2

1/1 point (ungraded)

A clustering index is defined on the fields which are of type

- ☒ non-key and ordering
- ☐ non-key and non-ordering
- ☐ key and ordering
- ☐ key and non-ordering



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 3

1/1 point (ungraded)

What type of join is needed when you wish to include rows that do not have matching values?

☐ Natural join

☒ Outer join

☐ Natural join

☐ Using where clause



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 4

1/1 point (ungraded)

Which of the following command is used to delete a table in SQL?

☐ Truncate

☐ Delete

☒ Drop

☐ Remove



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 5

1/1 point (ungraded)

Student (rollno , name, mobileneno)

StudentEnroll (rollno, courseno , batchno)

Rollno is the Primary key for Student Table and Rollno + Courseno is the Primarykey for StudentEnroll Table. The number of tuples in the Student and StudentEnroll tables are 120 and 8 respectively. What StudentEnroll are the maximum and minimum number of tuples that can be present in (Student natural join StudentEnroll)?

☐ 960, 8

☒ 8, 8

☐ 8, 960

☐ 120, 8



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 6

1/1 point (ungraded)

emp (empno, name, sex, salary, dept) – Primary Key empno

Select deptname from emp where sex = "F" group by deptname having avg(salary) > (select avg(salary) from emp)

☐ The average salary is more than the average salary in the company

☐ The average salary of male employees is more than the average salary of all male employees in the company

☐ The average salary of male employees is more than the average salary of employees in the same department

☒ The average salary of male employees is more than the average salary in the company



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 7

1/1 point (ungraded)

Which keyword is used to retrieve unique data from a column?

☐ UNIQUE

☐ SAME

☐ UNIQUEDATA

☒ DISTINCT



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 8

1/1 point (ungraded)

What is a view?

☐ A database table.

☒ A type of database object that is a virtual table based on the result set of a SELECT statement

☐ A database backup file format

☐ A compiled set of SQL statements



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 9

1/1 point (ungraded)

Which SQL statement is used to sort the result set in descending order?

☐ Order attribute_name DESC

☒ Order by attribute_name DESC

☐ Order by attribute_name

☐ Order by DESC attribute_name



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 10

1/1 point (ungraded)

Which SQL keyword do we use to set some value to a field whose value has not been giving explicitly

☒ default.

☐ check

☐ unique

☐ Not Null



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 11

1/1 point (ungraded)

What is a savepoint?

☒ A point in a transaction to which the transaction can be rolled back.

☐ A database configuration parameter

☐ A type of database backup

☐ Virtual Table



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 12

1/1 point (ungraded)

When we create any table, we should create a primary key otherwise we cannot create the table.

☐ True

☒ False



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 13

1/1 point (ungraded)

What is an alternate key in SQL

☐ An alternate key is another term for a primary key.

☒ An alternate key is a candidate key that is not selected as the primary key.

☐ An alternate key is another term for a foreign key.

☐ None of these



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 14

1/1 point (ungraded)

student (roll, name, address) -Primary Key is roll

marks (roll, cmarks, javamarks) – Foreign Key is roll

Which Statement is Correct?

☐ Select * from student and marks;

☐ Select * from student, marks where student.roll = marks.roll

☐ Select roll, name, cmarks, javamarks from student, marks where student.roll = marks.roll

☒ Select student.roll, name, cmarks, javamarks from student, marks where student.roll = marks.roll



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 15

1/1 point (ungraded)

You are working as a data analyst for a company that manages both employees and their assigned projects. The database schema includes two tables: "Employees" with columns "EmployeeID" and "EmployeeName," and "Projects" with columns "ProjectID," "EmployeeID," and "ProjectName." Your task is to retrieve a list of all employees and their assigned projects, including those who are not currently assigned to any project and projects that have no assigned employees. Which SQL join should you use?

☐ INNER JOIN

☒ FULL OUTER JOIN

☐ RIGHT JOIN

☐ LEFT JOIN



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 16

1/1 point (ungraded)

You are designing an E-R diagram for a university's student management system. The system should keep track of students, courses, and their enrollment details. A student can enroll in multiple courses, and each course can have multiple students. Which option represents the correct relationship notation between the "Students" and "Courses" entities in the E-R diagram?

☐ One-to-One (1:1) relationship

☐ One-to-Many (1:N) relationship

☒ Many-to-Many (N:N) relationship

☐ Many-to-One (N:1) relationship



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 17

1/1 point (ungraded)

emp (empno, name, email, mobile)

Display all employee name whose name has "a" alphabet.

Select correct SQL Query

☐ Select name from emp where name = "a"

☐ Select name from emp where name like "a"

☐ Select name from emp where name like "%a"

☒ Select name from emp where name like "%a%"



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 18

1/1 point (ungraded)

You are a database administrator responsible for managing a company's project database. Recently, you received a request from the HR department to generate a report that shows the total number of employees working in each project. Which SQL query will you use to retrieve the required information?

- ☐ SELECT COUNT() FROM table_name GROUP BY project;
- ☐ SELECT COUNT(DISTINCT (project)) FROM table_name;
- ☒ SELECT project, COUNT(*) FROM table_name GROUP BY project;
- ☐ SELECT SUM(COUNT(*)) FROM table_name GROUP BY project;



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 19

1/1 point (ungraded)

Which operator is used to check if a value is in a list of values in SQL?

- ☐ BETWEEN
- ☒ IN
- ☐ LIKE
- ☐ IS NULL



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 20

1/1 point (ungraded)

CAN WE DELETE PRIMARY KEY in an existing table?

☒ YES

☐ NO



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 21

1/1 point (ungraded)

Scrum follows an Agile Framework.

☒ TRUE

☐ FALSE



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 22

0/1 point (ungraded)

Who is responsible for removing obstacles or impediments that the scrum team faces during the development phase?

☐ Scrum Master

☒ Product Owner

☐ Development Team

☐ Stakeholders



Submit

You have used 1 of 1 attempt

✖ Incorrect (0/1 point)

Question 23

0/1 point (ungraded)

Which Scrum artifact represents a list of desired product features, enhancements, and bug fixes that make up the product backlog?

☐ Sprint Backlog

☒ User Stories

☐ Burndown Chart

☐ Product Backlog



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You have used 1 of 1 attempt

✖ Incorrect (0/1 point)

Question 24

1/1 point (ungraded)

You are part of an Agile development team working on a software project. During a sprint, the team encounters a technical issue that requires a significant amount of time to resolve. The team realizes that they won't be able to complete all the planned user stories within the

sprint. What should the team do?

- ☐ Extend the sprint duration to accommodate the extra work.
- ☐ Remove the incomplete user stories from the sprint backlog and continue with the remaining ones.
- ☒ Discuss the issue with the product owner and collectively decide which user stories are the highest priority and should be completed within the sprint.
- ☐ Add the incomplete user stories to the next sprint backlog and continue working on them.



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 25

1/1 point (ungraded)

You are a Scrum Master for a software development team working on a project. During the Sprint Planning meeting, the Product Owner provides a list of user stories to the team. However, some of the stories are vague and poorly defined, making it difficult for the team to estimate their effort accurately. What should you do in this situation?

- ☐ Proceed with the planning meeting as scheduled and let the team figure out the details during the Sprint.
- ☐ Make assumptions about the user stories and estimate their effort based on the available information.
- ☐ Skip the Sprint Planning meeting and schedule a separate meeting with the Product Owner to discuss the vague user stories.
- ☒ Ask the Product Owner to clarify the vague user stories before proceeding with the planning meeting.



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 26

1/1 point (ungraded)

What is the purpose of sprint burn down chart?

- ☐ It is used to measure how much work done.
- ☒ It is used to measure how much work is left to be done.

☐ Show Individual team member performance.

☐ Story telling.



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 27

1/1 point (ungraded)

What is done during a Sprint Review Meeting?

- ☐ Inspect progress towards the Sprint Goal.
- ☒ Demo of the Increment and Present the Project's performance to the Stakeholders.
- ☐ The team discusses the improvements that can be applied for the upcoming sprints.
- ☐ Discuss the architectural and technical aspects of the project.



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 28

1/1 point (ungraded)

Agile has _____ principles and _____ values

☒ 12 4

☐ 4 12

☐ 8 4

☐ 4 8



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 29

1/1 point (ungraded)

Which of the following is the working culture of an Agile team?

☒ Collaborative

☐ Connective

☐ Contemplative

☐ Connective + Contemplative



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 30

1/1 point (ungraded)

You are a member of an Agile development team working on a software project. During the sprint planning meeting, the team estimates that they can complete 10 story points worth of work in the upcoming sprint. However, the product owner insists on adding an additional 5 story points to the sprint backlog. What should the team do?

- ☐ Seek guidance from the Scrum Master to resolve the conflict.
- ☒ Negotiate with the product owner to prioritize the additional work for a future sprint.
- ☐ Accept the additional 5 story points and adjust the sprint plan accordingly.
- ☐ Reject the additional 5 story points and stick to the original sprint plan.



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 31

1/1 point (ungraded)

In Daily Standup, team reports status to the Scrum master.

☐ True

☒ False



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 32

1/1 point (ungraded)

It is mandatory that the product increment be released to production at the end of each sprint.

☐ True

☒ False



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 33

1/1 point (ungraded)

You are given a Single linked list of numbers, and you need to find the minimum numbers from that linked list. What is the time complexity?

☐ $O(1)$

☒ $O(n)$

☐ $O(n \log n)$

☐ $O(n^2)$



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 34

1/1 point (ungraded)

Which of the following sorting algorithms can be used to sort a random array with minimum time complexity?

☐ Bubble Sort

☐ Selection Sort

☐ Quick Sort

☒ Merge Sort



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 35

1/1 point (ungraded)

Which of the following is true about the linked list implementation of stack?

☐ In push operation, if new nodes are inserted at the end, then in pop operation, nodes must be removed from the end.

☐ In push operation, if new nodes are inserted at the beginning of linked list, then in pop operation, nodes must be removed from the beginning

☒ All of the above

☐ None of these



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 36

1/1 point (ungraded)

The minimum number of stacks needed to implement a queue is?

☐ 1

☐ 4

☒ 2

☐ 3



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 37

1/1 point (ungraded)

You need to store and retrieve bank account no and available dollar in the bank account. The system should allow quick access to the available dollar based on their account no. Which data structure would you choose to implement it?

☐ Linked List

☐ Array

☐ Graph

☒ Hash Table



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 38

1/1 point (ungraded)

What is the best time complexity of the bubble sort?

☐ n^2

☐ $\log n$ (base 2)

☒ n

☐ $n \log n$ (base 2)



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 39

1/1 point (ungraded)

You must sort 5 GB of data with only 800 MB of available main memory. Which sorting technique will be most appropriate?

☐ Quick sort

☐ Selection Sort

☐ Bubble Sort

☒ Merge Sort



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You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 40

1/1 point (ungraded)

Which of the following is true for computation time in finding maximum and minimum element in a sorted array?

☐ Maximum – $O(n)$, Minimum – $O(1)$

☐ Maximum – $O(1)$, Minimum – $O(n)$

☒ Maximum – $O(1)$, Minimum – $O(1)$

☐ Maximum – $O(n)$, Minimum – $O(n)$



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 41

1/1 point (ungraded)

Stack Follows

☒ Last In First Out (LIFO) Mechanism

☐ Last In Last Out (LILO) Mechanism

☐ First In First Out (FIFO) Mechanism

☐ First In Last Out (FILO) Mechanism



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 42

1/1 point (ungraded)

In Single LinkedList we can Traverse only One direction.

☒ TRUE

☐ FALSE



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 43

1/1 point (ungraded)

Linear Queue Follows.

☐ Last In First Out (LIFO) Mechanism

☐ Last In Last Out (LILO) Mechanism

☒ First In First Out (FIFO) Mechanism

☐ First In Last Out (FILO) Mechanism



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 44

1/1 point (ungraded)

There is No Null available in the circular linked list and from the last node, we can traverse to the first node.

☒ TRUE

☐ FALSE



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 45

1/1 point (ungraded)

Circular Queue is better than Linear Queue because of Efficient memory Management.

☒ TRUE

☐ FALSE



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 46

1/1 point (ungraded)

Dynamic Memory Allocation occurs at _____

☐ Compile Time

☒ Runtime

☐ Loading Time

☐ None of These



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 47

1/1 point (ungraded)

Select the correct sequence

☐ $O(n)$ is the best, then $O(\log 2n)$ and then $O(1)$

☒ $O(1)$ is the best, then $O(\log 2n)$ and then $O(n)$

☐ $O(\log 2n)$ is the best, then $O(1)$ and then $O(n)$

☐ None of these



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 48

1/1 point (ungraded)

In priority Queue value can be added in any order but at the time of deletion in the DECENDING priority queue, highest priority value will delete first.

☒ TRUE

☐ FALSE



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 49

1/1 point (ungraded)

Any text editor is the real-life example of Doubly Linked List.

☒ TRUE

☐ FALSE



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)

Question 50

1/1 point (ungraded)

Binary Search can only applicable if the values are already sorted.

☒ TRUE

☐ FALSE



Submit

You have used 1 of 1 attempt

✓ Correct (1/1 point)