

Date Functions Exercises

Question 1

```
SELECT emp_id,  
       name,  
       hire_date,  
       DATEADD ( Month, 6, "hire_date" ) AS hire_plus_6_months  
FROM employees;
```

emp_id	name	hire_date	hire_plus_6_months
1	Alice	2020-01-15	2020-07-15
2	Bob	2021-06-10	2021-12-10
3	Charlie	2023-03-22	2023-09-22

Question 2

```
SELECT student-id,  
       name,  
       DATEDIFF ( DAY, "dob", DATE "CURRENT - date" ) AS age-in-days  
FROM students;
```

student-id	name	dob	age-in-days
101	Maya	2005-08-10	7370
102	Ethan	2004-12-01	316
103	Sienna	2006-03-15	7134

Question 3

```
SELECT events-id,  
       event-name,  
       DATEDIFF ( DAY, "CURRENT-DATE", "event-date" )  
       AS days-remaining  
FROM events;
```

event-id	event-name	days-remaining
1	Seminar	-114
2	Workshop	-41
3	Hackathon	-265

Q4

```
SELECT invoice_id,  
       issue_date,  
       date due_date,  
       DATEDIFF (DAY, 'issue_date', 'due_date') AS days-between  
FROM invoice;
```

invoice_id	issue_date	due_date	days-between
501	2025-03-10	2025-03-25	15
502	2025-06-01	2025-06-15	14
503	2025-04-10	2025-04-20	10

Q5

```
SELECT course_id,  
       name,  
       TO_CHAR (start_date, 'Month YYYY') AS formatted_date  
FROM courses;
```

course_id	name	formatted_date
201	SQL Basics	MAY 2025
202	Python	JUNE 2025

Q6.

```

SELECT member - id ,
DATEFROMPARTS ( 'start - year' , 'start - month' , 'start - day' )
AS full - start - date
FROM memberships ;

```

member - id	full - start - date
1	2023 - 05 - 10
2	2022 - 11 - 25

Q7.

```

SELECT sub - id ,
plan ,
DATEADD ( YEAR , 1 , 'renewal - date' ) AS extended - renewal - date
FROM subscriptions ;

```

sub - id	plan	extended - renewal - date
11	Basic	2026 - 01 - 01
12	Premium	2026 - 03 - 15

Q8.

```

SELECT order - id , order - date ,
CURRENT_DATE () AS today - date ,
DATEDIFF ( DAY , 'order - date' , 'CURRENT - DATE' )
AS days - since - order
FROM orders ;

```

order - id	order - date	today - date	days - since - order
1001	2025 - 06 - 15	2025 - 10 - 12	150
1002	2025 - 04 - 10	2025 - 10 - 12	185

Q9

```
SELECT training_id,
       topic,
       DATEPART (YEAR, training_date) AS training_year
FROM trainings;
```

training_id	topic	training_date ^{year}
1	Safety	2025
2	Compliance	2025

Q10

```
SELECT post_id,
       title,
       EXTRACT ('HOUR' FROM published_on) AS hour_published,
       EXTRACT ('MINUTE' FROM published_on) AS minute_published
FROM blog_posts;
```

post_id	title	hour_published	minute_published
1	SQL Tips	10	15
2	Data Cleaning	16	43

Q11

```
SELECT driver_id,
       license_expiry,
       DATEDIFF (DAY, license_expiry, CURRENT_DATE)
       AS days_left
FROM drivers;
```

driver_id	license_expiry	days_left
301	2025-08-10	63
302	2023-12-31	-651

Q12

```

SELECT message-id,
       sent-timestamp,
       CURRENT-TIMESTAMP AS current-timestamp,
       DATEDIFF(SECONDS, sent-timestamp, CURRENT-TIMESTAMP)
       AS seconds-since-sent,
FROM messages;

```

message-id	sent-timestamp	current-timestamp	seconds-since-sent
1	2025-04-19 09:32:15	2025-10-12 22:20:00	14,103,135
2	2025-04-18 23:59:59	2025-10-12 22:20:00	14,116,201

Q13

```

SELECT return-id,
       return-date,
       DATEADD(DAY, 15, return-date) AS restock-date
FROM returns;

```

return-id	return-date	restock-date
901	2025-04-05	2025-04-20
902	2025-04-01	2025-04-16

Q14

```

SELECT assign-id
       TO-DATE(assigned-on, 'YYYY-MM-DD') AS assigned-on-date
FROM assignments;

```

assign-id	assigned-on-date
1	2025-03-01
2	2025-03-05

Q15

```
SELECT meeting_id,  
       TO_CHAR (scheduled_time, 'Month DD, YEAR') AS  
       AS formatted_meeting_time  
FROM meetings;
```


Null Function Exercises

Q1. SELECT employee_id,
name,
IFNULL (salary, 0) AS salary-with-default
FROM employees;

employee_id	name	salary-with-default
1	Alice	
2	Bob	0
3	Charlie	
4	Dana	0

Q2. SELECT employee_id,
name,
IFNULL (department, 'Not Assigned') AS department_name
FROM employees;

employee_id	name	department_name
1	Alice	HR
2	Bob	IT
3	Charlie	Not Assigned
4	Dana	Finance

Q3. SELECT employee_id, name,
COALESCE (salary, 0) AS salary-with-default
FROM employees;

Q4. SELECT employee_id, name, COALESCE (department, 'Not Assigned'),
AS department_name
FROM employees;

Q3 SELECT ~~emp~~ order_id,
customer_id
FROM orders
WHERE customer_id IS NULL;

order_id	customer_id
103	201 NULL

2022

Q4 SELECT order_id,
customer_id,
IFNULL(delivery_date, 'Pending')
FROM orders;

order_id	customer_id	delivery_status
101	201	2024-12-01
102	202	Pending
103	NULL	2024-12-03

Q5 SELECT student_id,
name,
IFNULL(grade, 0) AS final_grade
FROM students;

student_id	name	final_grade
1	Ethan	85
2	Maya	0
3	Olivia	90

Q6 ~~SELECT student_id,
name,
IFNULL (grade, 'NOT not-graded')~~

Q6 ~~SELECT COUNT (student_id) AS not-graded-count,
IFNULL (graded~~

Q6 SELECT COUNT (*) AS not-graded-count
FROM students
WHERE grade IS NULL ;

not-graded-count 1

Q7 SELECT product_id,
name,
COALESCE (discount, 0) AS final-price
FROM products ;

SELECT product_id
name,
IFNULL (discount, 0) AS final price
FROM products ;

product_id	name	final_price
301	Keyboard	0
302	Mouse	5
303	Monitor	0

Q8 SELECT COUNT (*) AS missing_email_count
FROM customers
WHERE email IS NULL;

missing_email_count
2

Q9 SELECT customer_id,
name,
IFNULL(email, 'No Email')
FROM customers;

customer_id	name	email
1	Linda	No Email
2	Joseph	joseph@mail.com
3	Nia	No Email

Q10 SELECT payment_id,
COALESCE(method, 'Unknown') AS method_display,
status
FROM payments;

payment_id	method	status
301	Credit	NULL
302	Paypal	Success
303	Unknown	Failed

Q11 SELECT item_id,
 item_name,
 COALESCE (quantity, 0) AS quantity_checked
 FROM inventory;

item_id	item_name	quantity_checked
1	Pen	0
2	Notebook	150
3	Eraser	0

Q12 SELECT emp_id
 COALESCE (bonus, commission) AS
 first_available_reward
 FROM employees_extra;

emp_id	first_available_reward
1	300
2	
3	

Q13 SELECT COUNT(*) AS no_room_count
 FROM classes
 WHERE room IS NULL;

no_room_count
2

Q14 SELECT student_id,
 date,
 IFNULL (status, 'Not Marked') AS attendance_status
 FROM attendance;

Student_id	date	attendance
1	2025-04-01	Not Marked
2	2025-04-01	Present
3	2025-04-01	Absent

Q15 SELECT account_id,
 COALESCE (account_type, 'Unknown')
 AS type_display,
 COALESCE (balance, 0) AS balance_checked
 FROM bank_accounts;

account_id	type_display	balance_checked
A1	Savings	0
A2	Current	5000
A3	Unknown	2000

Q16 SELECT project_id,
 title,
 IFNULL (start_date, 'TBD') AS start_display
 FROM projects;

project_id	title	start_display
1	Website Revamp	2025-01-10
2	Mobile App	TBD
3	Data Migration	TBD

Q17 SELECT review_id,
product_id,
COALESCE (comment, 'No Comment') AS comment_display,
COALESCE (rating, 0) AS rating_display
FROM reviews;

review_id	product_id	comment_display	rating_display
1	501	Great product	4
2	502	No Comment	0
3	503	Works fine	3

Q18 SELECT supplier_id,
name,
COALESCE (phone, alt_phone, 'No Contact')
AS contact number
FROM suppliers;

supplier_id	name	contact number
1	Global goods	123456789
2	Best Supplies	987654321
3	ValueSource	No Contact

Q19 SELECT user_id,
COALESCE (theme, 'Light') AS theme_set,
COALESCE (language, 'English') AS language_set,
COALESCE (timezone, (UTC)) AS timezone_set
FROM user_settings;

user_id	theme_set	language_set	timezone_set
1	Light	English	NA UTC
2	Dark	English	UTC+1
3	Light	English	UTC

Q 20 SELECT record_id,
 machine_id,
 COALESCE(issue, 'Unknown Issue') AS issue_log,
 COALESCE(technician, 'Not Assigned') AS technician_name
 FROM maintenance;

record_id	machine_id	issue_log	technician_name
1	M101	Overheating	Unknown technician Not Assigned
2	M102	Unknown Issue	Not assigned
3	M103	Jammed	Alex