

Date Functions Exercises

Q. 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	2023-09-27

Question 2

```
SELECT student_id,  
       name,  
       DATEDIFF(DAY, "dob", "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	-119
2	Workshop	-41
3	Hackathon	-265

Q4

```
SELECT invoice_id,  
       issue_date,  
       due_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	2025-04-01	2025-04-15	14
503	2025-04-10	2025-04-20	10

Q5

```
SELECT course_id,  
       name,  
       LEFT (start_date, 10) AS '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	2023-06-15	2023-10-12	150
1002	2023-04-10	2023-10-12	183

Q9

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

training_id	topic	training_date
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	2025-08-16	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 restocks_date
 FROM returns;

return-id	return-date	restocks 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  
          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

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

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

Q3 `SELECT order_id,
customer_id
FROM orders
WHERE customer_id IS NULL;`

order_id	customer_id
103	201 NULL

202

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

order_id	customer_id	delivery-status
101	201	2026-12-01
102	202	Pending
103	NULL	2026-12-03

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

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
501	Keyboard	0
502	Mouse	5
503	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
 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, name, 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	Not Assigned
2	M102	Unknown Issue	Unknown technician
3	M103	Jammed	Alex