Extracting Parts Of Dates

◆ 1. `YEAR()` – Year Nikaalne ke liye

Query:

```sql
SELECT YEAR('2025-07-16') AS YearPart;
```

Output:

```
YearPart
--------
2025
```

📌 **Note:** Poore date me se sirf year deta hai.

◆ 2. `MONTH()` – Month nikaalne ke liye

Query:

```sql
SELECT MONTH('2025-07-16') AS MonthPart;
```

Output:

```
MonthPart
---------
7
```

📌 **Note:** Month numeric form me aata hai (e.g., July = 7).

◆ 3. `DAY()` – Din nikaalne ke liye

Query:

```sql
SELECT DAY('2025-07-16') AS DayPart;
```

Output:

```
DayPart
-------
16
```

📌 **Note:** Month ka day deta hai.

◆ 4. `HOUR()` – Ghanta nikaalne ke liye (Time se)

Query:

```
SELECT HOUR('2025-07-16 14:30:00') AS HourPart;
```

Output:

```
HourPart
--------
14
```

◆ 5. `MINUTE()` – Minute nikaalne ke liye

Query:

```
SELECT MINUTE('2025-07-16 14:30:00') AS MinutePart;
```

Output:

```
MinutePart
----------
30
```

◆ 6. `SECOND()` – Second nikaalne ke liye

Query:

```
SELECT SECOND('2025-07-16 14:30:45') AS SecondPart;
```

Output:

```
SecondPart
----------
45
```

◆ 7. `DAYNAME()` – Din ka Naam

Query:

```
SELECT DAYNAME('2025-07-16') AS DayName;
```

Output:

```
DayName
--------
```

```
Wednesday
```

◆ 8. `MONTHNAME()` – Month ka Naam

Query:

```
SELECT MONTHNAME('2025-07-16') AS MonthName;
```

Output:

```
MonthName
---------
July
```

◆ 9. `WEEK()` – Week Number (1–53)

Query:

```
SELECT WEEK('2025-07-16') AS WeekNo;
```

Output:

```
WeekNo
------
29
```

◆ 10. `QUARTER()` – Quarter (1 to 4)

Query:

```
SELECT QUARTER('2025-07-16') AS Quarter;
```

Output:

```
Quarter
-------
3
```

◆ 11. `EXTRACT()` – Multi-purpose Function

Query:

```
SELECT EXTRACT(YEAR FROM '2025-07-16') AS YearExtract;
```

Output:

```
YearExtract
```

```
----------
2025
```

✍️ Extra Tip: Current Date Functions

- `CURDATE()` – Aaj ki Date
- `NOW()` – Aaj ka Date + Time
- `CURRENT_TIME()` – Sirf Time

Example:

```
SELECT CURDATE(), NOW(), CURRENT_TIME();
```

✅ Summary Table (Quick View):

Function	Output	Notes
YEAR()	2025	Year nikaalta hai
MONTH()	7	Month in number
DAY()	16	Day of month
HOUR()	14	24-hr format
MINUTE()	30	Minute part
SECOND()	45	Second part
DAYNAME()	Wednesday	Day ka naam
MONTHNAME()	July	Month ka naam
WEEK()	29	Week number
QUARTER()	3	3-month block
EXTRACT()	Flexible	Any part nikaale

➔

📄 **MySQL – DATE ARITHMETICS (Full Notes, Simple)**
Topic: Date Arithmetic in MySQL 📅

◆ 1. DATE ADDITION – Date me din/month/year jodna

✅ `DATE_ADD()` Function

Syntax:

```
DATE_ADD(date, INTERVAL value unit)
```

Example:

```
SELECT DATE_ADD('2025-07-16', INTERVAL 10 DAY) AS NewDate;
```

Output:

```
NewDate
---------
2025-07-26
```

☞ 10 din add hue.

More Examples:

```
SELECT DATE_ADD('2025-07-16', INTERVAL 2 MONTH) AS NewDate;
SELECT DATE_ADD('2025-07-16', INTERVAL 1 YEAR) AS NewDate;
```

◆ 2. DATE SUBTRACTION – Date me se ghatana

✅ `DATE_SUB()` Function

Syntax:

```
DATE_SUB(date, INTERVAL value unit)
```

Example:

```
SELECT DATE_SUB('2025-07-16', INTERVAL 15 DAY) AS NewDate;
```

Output:

```
NewDate
---------
2025-07-01
```

◆ 3. DATEDIFF() – Do dates ke beech ka fark (sirf days me)

Syntax:

```
DATEDIFF(date1, date2)
```

Example:

```
SELECT DATEDIFF('2025-07-16', '2025-07-01') AS DaysDiff;
```

Output:

```
DaysDiff
---------
15
```

📌 **Note:**

- Output = date1 - date2
- Sirf din ka count deta hai (no months/years).

◆ 4. TIMESTAMPDIFF() – Difference in any unit (years/months/days)

Syntax:

```
TIMESTAMPDIFF(unit, date1, date2)
```

Example:

```
SELECT TIMESTAMPDIFF(YEAR, '2000-01-01', '2025-01-01') AS YearDiff;
```

Output:

```
YearDiff
---------
25
```

Other Units:

- DAY, MONTH, HOUR, MINUTE, SECOND

Example:

```
SELECT TIMESTAMPDIFF(MONTH, '2024-01-01', '2025-07-01') AS MonthDiff;
```

Output:

```
MonthDiff
----------
18
```

◆ 5. Using INTERVAL in direct arithmetic (without function)

➕ Add days

```
SELECT '2025-07-16' + INTERVAL 5 DAY AS NewDate;
```

➖ Subtract months

```
SELECT '2025-07-16' - INTERVAL 2 MONTH AS NewDate;
```

◆ 6. ADDDATE() & SUBDATE() – Shortcut of DATE_ADD, DATE_SUB

```
SELECT ADDDATE('2025-07-16', INTERVAL 5 DAY);
SELECT SUBDATE('2025-07-16', INTERVAL 10 DAY);
```

☑ Summary Table:

Function	Work	Output Example
DATE_ADD()	Date me add karna	+10 DAYS
DATE_SUB()	Date me se minus karna	-2 MONTHS
DATEDIFF()	Do dates ka day-wise diff	15
TIMESTAMPDIFF()	Custom unit diff (MONTH, YEAR)	18 MONTHS
ADDDATE(), SUBDATE()	Shortcut functions	Same as above
+/- INTERVAL	Arithmetic form without function	Direct usage