Oracle 19c
Here are the 30 parameters with their recommended values and descriptions:

DB_CACHE_SIZE
Recommended Value: 2G
Description: Sets the size of the default buffer cache for the database's data blocks, which is critical for database performance as it determines the amount of memory available for caching data blocks.

SHARED_POOL_SIZE
Recommended Value: 1G
Description: Specifies the size of the shared pool, which contains shared SQL, PL/SQL, and other objects used by multiple sessions.

LARGE_POOL_SIZE
Recommended Value: 128M
Description: Determines the size of the large pool, used for large allocations such as RMAN backup buffers and parallel query buffers.

JAVA_POOL_SIZE
Recommended Value: 128M
Description: Specifies the size of the Java pool, used for all session-specific Java code and data within the database.

STREAMS_POOL_SIZE
Recommended Value: 128M
Description: Sets the size of the Streams pool, which is used by Oracle Streams for capturing, propagating, and applying changes.

SGA_TARGET
Recommended Value: 4G
Description: Specifies the total size of all SGA components and allows Oracle to automatically manage the distribution of memory between SGA components.

SGA_MAX_SIZE
Recommended Value: 6G
Description: Determines the maximum size of the SGA, providing an upper limit on memory usage for the SGA components.

PGA_AGGREGATE_TARGET
Recommended Value: 2G
Description: Sets the target aggregate PGA memory available to all server processes, which is crucial for sorting and other operations that require memory.

MEMORY_TARGET
Recommended Value: 8G
Description: Specifies the total memory available to the database (SGA + PGA) and enables automatic memory management.

MEMORY_MAX_TARGET
Recommended Value: 10G
Description: Specifies the maximum memory target for automatic memory management, providing a limit for the combined SGA and PGA memory.

DB_KEEP_CACHE_SIZE
Recommended Value: 512M
Description: Sets the size of the keep buffer cache, which retains frequently accessed data blocks in memory to improve performance.

DB_RECYCLE_CACHE_SIZE
Recommended Value: 512M
Description: Determines the size of the recycle buffer cache, which is used for less frequently accessed data blocks.

LOG_BUFFER
Recommended Value: 64M
Description: Specifies the amount of memory allocated for the redo log buffer, which is used to store redo entries before writing them to the redo log files.

UNDO_RETENTION
Recommended Value: 3600 (1 hour)
Description: Sets the retention period for undo data, which is necessary for read consistency and recovery operations.

UNDO_TABLESPACE
Recommended Value: UNDOTBS1
Description: Specifies the tablespace to store undo data, which is used to provide read consistency and to roll back transactions.

REDO_LOG_FILES
Recommended Value: 3 files, each 500M
Description: Configures the number and size of redo log files, which are used to record changes to the database.

DB_WRITER_PROCESSES
Recommended Value: 2
Description: Sets the number of database writer processes, which are responsible for writing dirty buffers from the buffer cache to disk.

DB_FILE_MULTIBLOCK_READ_COUNT
Recommended Value: 16
Description: Specifies the maximum number of blocks read in one I/O operation during a full table scan, affecting the efficiency of large read operations.

OPTIMIZER_MODE
Recommended Value: ALL_ROWS
Description: Determines the mode of the optimizer (e.g., ALL_ROWS for throughput optimization, FIRST_ROWS for response time optimization).

OPTIMIZER_INDEX_CACHING
Recommended Value: 90
Description: Specifies the percentage of index blocks to be cached, which affects the cost calculations of index scans by the optimizer.

OPTIMIZER_INDEX_COST_ADJ
Recommended Value: 25
Description: Adjusts the cost of index access, which influences the optimizer's choice between index scans and full table scans.

CURSOR_SHARING
Recommended Value: FORCE
Description: Determines how SQL statements are shared (e.g., EXACT, FORCE) to reduce hard parses and improve performance.

SESSION_CACHED_CURSORS
Recommended Value: 200
Description: Sets the number of cached cursors each session can use, which reduces the overhead of parsing SQL statements.

OPEN_CURSORS
Recommended Value: 1000
Description: Specifies the maximum number of open cursors a session can have, which affects the ability to handle multiple active SQL statements.

PARALLEL_MAX_SERVERS
Recommended Value: 256
Description: Sets the maximum number of parallel execution servers, which are used for parallel query execution.

PARALLEL_MIN_SERVERS
Recommended Value: 16
Description: Determines the minimum number of parallel execution servers, ensuring that a certain number of servers are always available for parallel operations.

PARALLEL_DEGREE_POLICY
Recommended Value: AUTO
Description: Controls the automatic degree of parallelism, allowing the database to automatically determine the appropriate parallelism for queries.

PARALLEL_EXECUTION_MESSAGE_SIZE
Recommended Value: 16K
Description: Specifies the size of the messages used in parallel execution, affecting the communication efficiency between parallel execution servers.

DISK_ASYNCH_IO
Recommended Value: TRUE
Description: Enables or disables asynchronous I/O on datafiles, control files, and log files, which can improve I/O performance.

TIMED_STATISTICS
Recommended Value: TRUE
Description: Enables or disables the collection of timed statistics, which are necessary for performance monitoring and tuning.