CHAPTER NAME : HIBERNATE

1) What is difference between jdbc and hibernate?
Ans: -
➢ JDBC is a technology and hibernate is a framework.
➢ JDBC works with rows and columns (RDBMS approach) whereas hibernate works with class
and variables (object-oriented approach).
➢ JDBC does not built-in functions for performing CRUD operations on Database.
➢ Hibernate has built in methods for performing CRUD operations.
➢ JDBC code is database dependant code and Hibernate code is Database independent code.

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2) What are in built methods in hibernate? Can u explain each of them in brief.

Hibernate has below built-in methods: -

1) save(Object o): - It saves given object's state (object's data) into database table.
Student obj = new Student (1,90);
session. save(obj);

2) delete(Object o): - It delete given object's data from the database table.
Student std =session.load(Student.class, 1);
session.delete(std);

3) update(Object o): - It update object's data.
Student std = session.load(Student.class,1);
std.setstudAddress("Mumbai");
session.update(std);

4) Object load(Class c, Serializable id): - it loads data of an object from the database.
e.g. load(Student.class,1) will load rollnumber 1's data from the database and gives us object of Student class [rno=1 marks=90]
 Student class object
Student std = session.load(Student.class,1);

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3) Can you explain Criteria in hibernate?

Criteria API is used to load object's data from database based on some conditions.It has Restrictions class which contains many methods for writing condition on what basis object's data will be loaded.
e.g. Criteria criteria=session.createCriteria(Student.class);
criteria.add(Restrictions.gt("rno", 1)).add(Restrictions.like("studName","%k%"))

It will load those students whose rno is greater than 1 and whose name has k character Criteria API contains Projections class using which we can read partial object means only some property's values not all property's values. e.g. If Student has 4 properties like rno, name, age, x marks and we want only 2 property's values rno, age then using Projections class, it is possible to do it.
Projections class also contains some aggregate functions like rowCount(), max(),min(),sum().

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4) Can you explain Query in Hibernate?

Query interface is used to execute HQL queries. for executing select HQL query we use list() and for non-select query we use executeUpdtae().HQL queries are Database independent queries whereas SQL queries are database dependant queries.

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5) What are files required to do simple insert operation in hibernate?

1) Hibernate configuration file: - it contains Database connection details; some hibernate properties like hbm2ddl.autodialect class , show_sql etc.

2) Entity class: - This is the class whose object's contents will be saved in a database using save(). @Entity annotation is used to specify that class is Entity class. It should containprimary key field which is marked with @Id annotations.

3) Client class: - This class contains main() method where we call save() of session interface for saving object's contents

Note: - All hibernate jar files should be kept in project's build path

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6) What are advantages of hibernate?

➢ Hibernate works with class and variables (object oriented approach). So, we don't need to have SQL knowledge (RDBMS).
➢ JDBC code is database dependant code and Hibernate code is Database independent code. So
even if we change the database, we don't need to rewrite HQL queries Hibernate speed up
development process as it contains many built-in methods for doing some common database
operations In hibernate we don't have methods which are throwing checked exception, otherwise in JDBC, we had to compulsory handle exception as JDBC methods throw checked exception.