2. Write a detailed note on:

i. @Component @Service @Repository

ii. @Autowired

[iii.@Bean](mailto:iii.@Bean)

i)@Component

It is a generic stereotype for any Spring-managed component. Those classes annotated as @Component marks a java class as bean and is considered for autodetection when using annotation-based configuration and classpath scanning. It is more generalized form of the annotations and can be used for any type of beans to inform the component-scanning mechanism.

@Service

It is used with service classes where business logic is implemented.It is a specialization of @Component.It makes a class autodetectable during classpath scanning.So the java class need not be declared as bean in configuration file.

@Repository

It is a specialization of @Component annotation and is used with classes that performs the database logic that is the Data Access Object classes.They represent a persistence layer.

ii)@Autowired

It is used for automatic dependency injection.All java classes acting as beans need to configured in spring bean configuration file.By autowiring bean injection need not be done explicitly.It can be applied on properties,getters ,constructers etc.In large applications explicit wiring causes large xml coding in configuration file.Spring container matches the property type and name with other beans in the container based on specific type or name.autowire property can take following values

byName- Spring container will find the bean whose name matches name of property being wired.

byType –Spring will find a bean whose type matches type of property being wired.

constructor-Spring will match one or more beans with parameters of constuctors of bean that is wired.

autodetect-Spring will try to wire the bean first by using constructor and then byType.

iii)@Bean

It is a method level annotation used to declare a bean explicitly.It was introduced from Spring 3.0 It can be used with @Configuration to avoid using xml file and use java config.