NATIONAL INSTITUTE OF TECHNOLOGY ANDHRA PRADESH

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

III B.Tech I Semester MID Examination, September 2024

CSM301 & CSM302-Object oriented programming (Minor)

Date: 26-09-2024   **Max. Marks: 30**

1	a)	Demonstrate the role of constructors in object initialization with an example.	3M
1	b)	Demonstrate method overriding and how it is used in Java with an example.	3M
2	a)	Develop a java program by considering a positive integer N, find whether the number is palindrome or not.	3M
2	b)	Describe methods of creating a 'throw' and 'throws' in Java? Provide an example illustrating their use.	3M
3	a)	Why are interfaces used in Java and write a java program that implement multiple interfaces ?	3M
3	b)	Demonstrate abstract class and how it is used in Java with an example.	3M
4		Illustrate the principle concepts of object oriented programming like encapsulation, class and object in java with an examples?	6M
5		Construct a user defined Java Package to compute statistics of a set of numbers. Common statistics includes mean (also known as average) and standard deviation (tells how spread out the data are from the mean). Construct a class named as Student and properties of the class are Name, Branch, Marks in Six different subjects, and email_id. By make use of the user defined package, find the statistics of each subject and overall class. In addition to that, implement helper methods such as getMax() and getMin() to return the details of the students who scored maximum and minimum marks in each subject.	6M