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Java Programing-I - Practical Exam Paper

Duration: 60 minutes | Total Marks: 15

Write a class Clock for dealing with the day time represented by hours, minutes, and seconds. Your class must have the following features:

Three instance variables for the hours (range 0 - 23), minutes (range 0 - 59), and seconds (range 0 - 59).

Three constructors:

- ✓ Default (with no parameters passed; is should initialize the represented time to 12:0:0)
- ✓ A constructor with three parameters: hours, minutes, and seconds.

Instance methods:

- ✓ A set-method method setClock() with one parameter seconds since midnight (to be converted into the time value in hours, minutes, and seconds as above).
- ✓ get-methods getHours(), getMinutes(), getSeconds() with no parameters that return the corresponding values.
- ✓ set-methods setHours(), setMinutes(), setSeconds() with one parameter each that set up the corresponding instance variables.
- ✓ method tick() with no parameters that increments the time stored in a Clock object by one second.
- ✓ method addClock() accepting an object of type Clock as a parameter. The method should add the time represented by the parameter class to the time represented in the current class.
- ✓ Add an instance method toString() with no parameters to your class. toString() must return a String representation of the Clock object in the form "(hh:mm:ss)", for example "(03:02:34)".
- ✓ Add an instance method tickDown() which decrements the time stored in a Clock object by one second.

Write a separate class ClockDemo with a main() method

	Marking:
3.0	Create class Clock and constructors
10.0	Create instance methods
2.0	Write ClockDemo class with main()
15.0	*Total Marks*