

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2019

Course: SOFTWARE CRAFTSMANSHIP OVERVIEW

Program: B.tech CSE DevOps

Course Code: CSSC3001

Semester: Vth

Time : 03 hrs.

Max. Marks: 100

Instructions:

SECTION A

Q1	“Explain the principles of Software Craftsmanship”.	4	CO1
Q2	Explain the Building blocks of OOPs.	4	CO4
Q3	Differentiate Clean Code from Bad Code. Why is it called a bad code?	4	CO2
Q4	What are the best commenting practices for writing clean code?	4	CO3
Q5	Name some common IDE’s for writing a well-crafted code. Explain briefly about each.	4	CO5

SECTION B

Q 6	Why is it necessary to document a code? What practices lead to well documented code?	10	CO1
Q7	What id DTO? Explain with example. What is the need of using DTO.?	10	CO3
Q8	What is the rule of 30? “ Metaphors should be encouraged in code”.Comment	10	CO4
Q9	(Attempt any one) Explain the “LAW OF DEMETER” with example. OR Define and describe the open closed principle. Provide a suitable example in support of the answer	10	CO3

SECTION-C

Q 10	“A class may expose its attributes (class variables) to manipulation when manipulation is no longer desirable, e.g. after construction. Using the private class data design pattern prevents that undesirable manipulation” In context with the given discussion identify the problem in the given code and refactor the code to provide optimum solution.	20	CO5
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	<pre> public class Circle { private double radius; private Color color; private Point origin; public Circle(double radius, Color color, Point origin) { this.radius = radius; this.color = color; this.origin = origin; } public double Circumference { get { return 2 * Math.PI * this.radius; } } public double Diameter { get { return 2 * this.radius; } } public void Draw(Graphics graphics) { //... } } </pre>		
<p>Q11</p>	<p>(Attempt any one)</p> <p>a). What are design Patterns? How many categories of design patterns are available for ease of coding. Explain each one of them</p> <p>b) “Application "hard wires" the class of object to create in each "new" expression. “Explain the design pattern that supports the solution for the given problem.</p>	<p>(10+10)</p>	<p>CO2</p>
	<p>OR</p> <p>a).Why do the code smell? Explain possible factors that leads to a smelly code.</p> <p>b). “Refactoring removes the code smell”. Describe the possible techniques to refactor the code,</p>	<p>(10+10)</p>	<p>CO2</p>