

**GOVERNMENT COLLEGE OF ENGINEERING, JALGAON**

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Name of Examination : **Winter 2020** - (Preview)Course Code & Course Name : **CO201U - Object Oriented Programming**Generated At : **19-04-2022 11:08:37**Maximum Marks : **60**Duration : **3 Hrs**[Edit](#)[Print](#)[Close](#)**Answer Key Submission Type:** No marking scheme and solution

Instructions:

1. All questions are compulsory.
2. Illustrate your answer with suitable figures/sketches wherever necessary.
3. Assume suitable additional data; if required.
4. Use of logarithmic table, drawing instruments and non programmable calculators is allowed.
5. Figures to the right indicate full marks.

**1) Attempt all of the following**

[ ]

- a. How data and functions organized in an object-oriented program? Explain with example.
- b. List few areas of applications of OOP technology.
- c. What is the class? How does it accomplish data hiding? Explain with example

[4]

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[4]

**2) Attempt any two of the following**

[ ]

- a. Write a program to declare a class 'motorbike' having data member as brand\_ name, an average distance for one liter offered. Accept and display this data for 50 bikes.
- b. One interesting use of static member variable to keep track of a number of objects of a class that is in existence at any given instance of time. The way to do this is to increment a static member variable each time when an object is created & decremented when an object is destroyed. Write a program to implement such schemes
- c. What is the friend function? How it differs from member function. Explain with a suitable example(program).

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**3) Attempt the following**

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- a. Define a class product with data members product\_id, product\_name, and price. Write a program using the constructor with the default value for product\_id. Accept this data for 5 objects of the class and calculate the total price of the product
- b. What is operation overloading? Overload the operator so that two strings can be concatenated eg. "abc"+"xyz". The output will be "abcxyz"

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**4) Attempt any two of the following**

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- a.