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## BMS College of Engineering, Bangalore-560019

(Autonomous Institute, Affiliated to VTU, Belgaum)

June / July 2014 Semester End Make Up Examinations

Course: **Software Engineering**

Course Code: 10CI6GCSWE

Duration : 3 hours

Max Marks: 100

Date: 04.07.2014

Instructions: Answer five full questions choosing one from each unit.

### UNIT 1

- 1 a. What is Software? What are the attributes of good software? 05
- b. What are the key challenges facing software engineering? Explain 05
- c. Explain system components of legacy systems with a neat diagram. 10

OR

- 2 a. Explain the various types of non-functional requirements in detail. 10
- b. With the help of a diagram, explain the spiral model of requirements engineering process. 10

### UNIT 2

- 3 a. Draw a state machine model of control software for an iron box which has various programs for different types of clothes to be pressed 04
- b. Develop an object model, including a class hierarchy diagram and an aggregation diagram showing principal components of PC system and its system software 08
- c. Develop a bar chart and an activity network for the following tasks listed. 08

Tasks	Days	Dependency
T1	10	-
T2	25	T1
T3	8	
T4	15	T3,T2
T5	8	T4

### UNIT 3

- |   |    |  |    |
|---|----|--|----|
| 4 | a. | Explain how system architecture affects the non-functional requirements of the system. | 05 |
|   | b. | Discuss the advantages and disadvantages of repository model.                          | 05 |
|   | c. | List the guide lines for identifying the object classes.                               | 05 |
|   | d. | Explain concurrent objects.  | 05 |

### UNIT 4

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|---|----|---|----|
| 5 | a. | List and explain the principles of agile methods.   | 05 |
|   | b. | List and explain different types of interface testing and Interface errors                  | 05 |
|   | c. | Explain inspection process with a diagram. List and explain the roles in inspection process | 10 |

### OR

- |   |    |   |    |
|---|----|---|----|
| 6 | a. | Describe five key strategies of clean room software development                                   | 05 |
|   | b. | Identify various approaches that are available for test case design                               | 05 |
|   | c. | With the help of a diagram explain the extreme programming release cycle along with its practices | 10 |

### UNIT 5

- |   |    |                                    |    |
|---|----|------------------------------------|----|
| 7 | a. | Write Short notes on:              | 20 |
|   |    | (i) Automated Static Analysis      |    |
|   |    | (ii) Rapid Application development |    |
|   |    | (iii) Control Styles               |    |
|   |    | (iv) Socio-Technical Systems       |    |

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