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BMS College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

January 2018 Semester End Make Up Examinations

Course: Software Engineering **Duration: 3 hrs**
Course Code: 16CS5DCSWE **Max Marks: 100**
Date:11.01.2018

Instructions: **Answer FIVE FULL questions, choosing one from each unit.**

UNIT 1

1.	a)	Describe in detail ACM/IEEE Software Engineering code of ethics.	08
	b)	Identify 6 significant stakeholders of a banking system.	06
	c)	Draw a sequence diagram to illustrate how library books are issued to library members.	06

UNIT 2

2.	a)	It is necessary to design the system architecture before implementation. Justify?	05
	b)	Identify functional and nonfunctional requirements of a bus reservation system.	05
	c)	Suggest an appropriate control model for the following system 1. A set of software tools that are produced by different vendors, but which must work together 2. A quad copter controller that responds to signals from a remote control unit	05
	d)	A news organization accumulates huge data on day to day basis; these accumulated data are shared by several analysts and news editors who work in the same premises. Select a suitable architecture to store the accumulated data. Justify your selection.	05

UNIT 3

3.	a)	Explain W^5HH principle in detail.	06
	b)	Identify 8 early signs that indicate that an information system is in danger.	08
	c)	It is estimated that the development of 3- Dimensional software suite requires 600FP. If the team's productivity is 6FP/pm at a burdened labor rate of $5000. Calculate the cost of the 3- Dimensional software suite and estimated effort in person-months.	06

OR

4.	a)	Explain the basic principles that guide software project scheduling.	06

b) Analyze and state the reasons behind delayed software delivery. 08

c) A project manager estimates the following data for a new project 06

	Use-cases	Scenarios	Pages	Scenarios	Pages	LOC	LOC estimate
UI subsystem	6	10	6	12	5	560	3300
Control subsystem	10	20	8	10	8	3100	31000
DataStore	5	6	5	10	6	1650	7700
Total LOC estimate							42000

Based on previous projects the project manager realizes that the teams average productivity is 600LOC per month at a burdened labor ate of $6000 per month. Calculate the cost of the project and estimated effort in person-months.

UNIT 4

5. a) Explain the principles underlying agile methods that lead to accelerated development and deployment of software. 06

b) Justify the use of software prototype in software development process. 06

c) A medium scale organization is planning to automate its business. Being a consultant discuss how the organization can benefit from RAD. 08

OR

6. a) Distinguish between software inspection and software testing. 06

b) Describe the stages in automated static analysis. 06

c) Design a test case for validating credit card. 08

UNIT 5

7. a) Explain classification of software system requirements. 05

b) Identify the pros and cons of layered architecture. 05

c) Identify 4 software team organization as classified by Constantine. 05

d) Identify the key strategies of clean room software development. 05

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