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Code No. : 35003

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
M.C.A. (CBCS) V-Semester Main Examinations, December-2018

Software Reuse Techniques

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Q.No.	Stem of the question	M	L	CO	PO
Part-A (10 × 2 = 20 Marks)					
1.	Does a common software process promote code reuse? Support your answer.	2	4	1	1
2.	What are Idioms?	2	2	1	1
3.	Write the intent of Abstract factory pattern.	2	1	2	1
4.	How is Prototype pattern related to Builder pattern?	2	2	2	1
5.	Write the intent of Facade pattern.	2	2	3	1,2,4
6.	List the different types of Proxies.	2	1	3	1,2,4
7.	How is state pattern related to Flyweight pattern?	2	2	4	3,4
8.	Name the patterns to which Memento pattern is related.	2	1	4	3,4
9.	Define Frameworks.	2	1	5	3
10.	List the patterns used for problems related to communication systems.	2	1	5	3
Part-B (5 × 10 = 50 Marks)					
11. a)	"Facades control access to component system internals." Justify.	5	4	1	1
b)	What are variation points? Explain tracing use case variability in object models.	5	2	1	1
12. a)	What is a design pattern? Explain the characteristics of design patterns.	5	2	2	1
b)	Explain the Singleton pattern with the help of an example.	5	2	2	1
13. a)	Write the intent of adapter pattern. Briefly describe its structure and applicability.	5	2	3	1,2,4
b)	How is the Bridge pattern useful? List out its implementation issues.	5	2	3	1,2,4
14. a)	List out the advantages of observer pattern over other behavioral patterns.	5	3	4	3,4
b)	Explain Master-slave pattern. Illustrate its dynamics with an example.	5	2	4	3,4
15. a)	Describe the intent and structure of Broker pattern with the help of an example.	5	2	5	3
b)	Differentiate between Layers pattern and Pipes and Filters pattern.	5	3	5	3

16. a)	Illustrate how the application systems and the component systems foster software reuse.	5	2	1	1
b)	Differentiate between creational and structural patterns.	5	3	2	1
17.	Answer any <i>two</i> of the following:				
a)	Illustrate the command pattern with example.	5	2	3	1,2,4
b)	Differentiate between the Forwarder-Receiver and Client-Dispatcher-server patterns	5	3	4	3,4
c)	How does Blackboard pattern help in an immature domain? Give example.	5	3	5	3

M: Marks; L: Bloom's Taxonomy Level; CO: Course Outcome; PO: Programme Outcome

S. No.	Criteria for questions	Percentage
1	Fundamental knowledge (Level-1 & 2)	60
2	Knowledge on application and analysis (Level-3 & 4)	40
3	*Critical thinking and ability to design (Level-5 & 6) (*wherever applicable)	---

