

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2022
(Sixth Semester)

Branch – SOFTWARE SYSTEMS (Five year Integrated)

SOFTWARE PATTERNS AND ARCHITECTURE

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

1. _____ is a measure of how closely connected two routines or modules are.
(i)Coupling (ii)Connection (iii)Dependency (iv)Cohesion
2. Which of the following is the worst type of module cohesion?
(i)Logical (ii)Temporal (iii)Functional (iv)Coincidental
3. _____ pattern systematically names, motivates, and explains a general design.
(i) Design (ii)Structural (iii)Overall (iv)Procedural
4. The _____ software design pattern refers to an object that minimizes memory usage.
(i)Spiral (ii)Singleton (iii)Flyweight (iv)Proxy
5. MVC is used for developing _____.
(i)User links (ii)Frontend (iii)Command line (iv)User interface
6. An architectural pattern will be appreciated most if it is _____.
(i)Readable (ii)Repairable (iii)Reusable (iv)Resizable
7. _____ is indication which representing some part is incorrect in the software.
(i)Error (ii)Bug (iii)Bad smell (iv)Bad code
8. _____ is defined as systematic process of improving computer code.
(i)Redesigning (ii)Recoding (iii)Restructuring (iv)Refactoring
9. Identify the smell that indicates violation of fundamental design principles.
(i)Design (ii)Code (iii)Design & Code (iv)Design & Test
10. Smells impact the design in _____ manner.
(i)Negative (ii) Continuous (iii)Rare (iv)Frequent

SECTION - B (25 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 5 = 25)

11. a. Analyze the necessity of reusable object-oriented software.
(Or)

b. Classify the types of pattern.

12. a. Discuss the concept of prototype.

(Or)

b. Differentiate observer and mediator pattern.

13. a. Determine the uses of distributed systems.

(Or)

b. State the overview of model view controller.

Cont...

14. a. Discuss the concept of refactoring.

(Or)

b. Recommend the methods to simplify the conditional expressions.

15. a. Illustrate about of encapsulation smells.

(Or)

b. List out the enabling techniques for applying the principle of modularization.

SECTION-C (40 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 8 = 40)

16. a. Elucidate the best practices of designing software.

(Or)

b. Enumerate the benefits of design patterns.

17. a. Interpret the concept of composite and decorator structural design patterns.

(Or)

b. Analyze the components of behavioral patterns.

18. a. Analyze the role of pipes and filters in architectural patterns.

(Or)

b. Explain about the presentation abstraction control.

19. a. Elucidate the composing methods of refactoring.

(Or)

b. Interpret the concept of design refactoring.

20. a. Elucidate the causes of design smells.

(Or)

b. Explain about hierarchy smells.

Z-Z-Z

END