

Exam Code: 107206
(50)

Paper Code: 6190

Programme: Bachelor of Computer Applications
Semester-VI

Course Title: Software Engineering

Course Code: BCAL-6112 ✓

Time Allowed: 3 Hours

Max Marks: 60

Note: Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section. Each question is of equal (12Mark)

Section A

1. What is Software Engineering? What are the importance of Software engineering? Explain different phases of SDLC. (12)
2. Explain Classic Waterfall Model? How it is different from Prototyping Model? (12)

Section B

3. (a) Draw and explain Data Flow diagram for Library Management System to displays more pertinent information about library employees and how they interact with the library management system internally, such as adding or removing information, authenticating students, issuing and returning books, etc. (7)

- (b) Explain SRS Document? What are the characteristics and components of a good SRS Document? (5)
4. (a) Explain the Structure Chart in software Design.
 (b) What are Coupling & Cohesion? How they depend on each other? (6x2)

Section C

5. Discuss the basic Constructive Cost Estimation Model in detail. (12)
6. What is Functional- Point Quality Metrics? Explain the method of computing Function-Point Quality Metric in detail using following example: Consider a project with the following functional units:
- Number of user inputs = 25
 Number of user outputs = 30
 Number of user enquiries = 10
 Number of user files = 5
 Number of external interfaces = 4

Measurement parameter	Weighting factor		
	Simple	Average	Complex
Number of user inputs	3	4	6
Number of user outputs	4	5	7
Number of user inquiries	3	4	6
Number of files	7	10	15
Number of external interfaces	5	7	10

Assuming all complexity adjustment factors and
Weighing factors as average (12)

Section D

7. What are the Coding Standards and Guidelines? Explain
Code walkthrough and Code inspection. (12)
8. Explain:
 1. White Box Testing (8)
 2. Validation and Verification (4)

Paper Code: 6192

Programme	Exam Code	Course Code
Bachelor of Computer Applications	107206	BCAL-6111 ✓
Bachelor of Science (Information Technology)	105706	BITL-6111 ✓

Semester-VI

Course Title: Computer Graphics
(60)

Time Allowed: 3 Hours

Max Marks: 60

Note: There are eight questions of equal marks (12 marks each). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

Section A

- Write real life applications of Computer Graphics.
(12)
- What do you understand by Raster and Random scans technologies. Also differentiate between the two.
(12)

Section B

- Scan convert the line by Simple DDA method whose end points are (8,5) and (13,12) and find the points to be plotted.
(12)

4. Write algorithm of Mid point ellipse drawing along with its derivation. (12)

Section C

5. Reflect a square A(1,1), B(3,1), C(3,3) and D(1,3) about horizontal line $y=3$, vertical line $x=3$ and line $y=x+1$. (12)
6. Write steps of Cohen Sutherland line clipping algorithm with suitable example. (12)

Section D

7. Explain Translation, Rotation and Scaling operations in 3D. (12)
8. Explain the following
- a) Types of parallel projection
 - b) View Confusion
 - c) Topological distortion (3*4 = 12)

Paper Code: 6193

Programme	Course Code	Exam Code
Bachelor of Computer Applications	BCAM-6115	107206
Bachelor of Science (Information Technology)	BITM-6115	105706

Semester: VI

Course Title: Data Mining Tool

Time Allowed: 3 Hours

Max Marks: 30

Note: Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section. Each question carries 6 marks.

Section – A

1. Explain the features of Weka tool.
2. Explain the term Confusion Matrix, Precision and Recall in Machine Learning?

Section – B

3. Explain the term Machine Learning. Explain the term supervised, unsupervised and Reinforcement learning in detail.
4. Explore various options available in Weka for pre-processing data and discretize, Resample filter.

Section – C

5. Explain ID3 algorithm with examples using Weka.
6. Explain Naïve Bayes algorithm with examples using Weka.

Section – D

7. Explain K means clustering algorithm with examples using Weka
8. Explain clustering techniques available in Weka.