**UG–C–2382** **BCA–08X**

# U.G. DEGREE EXAMINATION — DECEMBER 2023

Computer Application

Second Year

MULTIMEDIA

Time : 3 hours Maximum marks : 70

PART A — ($3 \times 3 = 9$ marks)

Answer any THREE questions out of Five questions in 100 words.

All questions carry equal marks.

1. Define Multimedia.

2. Write the types of Multimedia Communication.

3. List the tools available in Multimedia Applications.

4. What is Multimedia Graphics? Give example.

5. List out the software's used in multimedia.

PART B — $(3 \times 7 = 21$ marks)

Answer any THREE questions out of Five questions in 200 words.

All questions carry equal marks.

6. Write short note on Multimedia components.

7. Discuss about Multimedia in Production.

8. Explain in detail about Hypertext Elements.

9. Discuss about Story board in Multimedia.

10. Explain any three software used in Multimedia applications.

PART C — $(4 \times 10 = 40$ marks)

Answer any FOUR questions out of Seven questions in 500 words.

All questions carry equal marks.

11. Explain in detail about Multimedia IO Devices.

12. How multimedia support business activities? Explain.

13. Discuss about the copyright issues in multimedia management.

14. Write a Case study for Student Information Management using Multimedia Tools.

15. Discuss in detail about Digital Audio and Video.

16. How Publication Industry collaborated with Multimedia? Explain.

17. Explain the Graphical Interaction with Multimedia.

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**UG-C-2385** **BCA-11X**

U.G. DEGREE EXAMINATION – DECEMBER, 2023.

Computer Applications

Second Year

# INTRODUCTION TO SOFTWARE ENGINEERING

Time : 3 hours Maximum marks : 70

PART A — ($3 \times 3 = 9$ marks)

Answer any THREE questions out of Five questions in 100 words

All questions carry equal marks

1. Define: software engineering.

2. What is stepwise refinement?

3. What is configuration management?

4. What is Unit testing?

5. List the any three software testing strategies?

PART B — ($3 \times 7 = 21$ marks)

Answer any THREE questions out of Five questions in 200 words

All questions carry equal marks

6. Explain the spiral model in detail.

7. List the factors to be considered in project planning.

8. Explain about software review.

9. Give an account on quality assurance in detail.

10. What do you mean by Debugging? Write down the steps involved in debugging.

PART C — ($4 \times 10 = 40$ marks)

Answer any FOUR questions out of Seven questions in 500 words.

All questions carry equal marks.

11. Explain about fourth generation techniques in detail.

12. Elaborate the role of system analyst and his attributes.

13. What is ISO? Explain the ISO standards for software quality.

14. What are the activities involved in system testing? Explain.

15. Illustrate the cost estimation procedure using COCOMO model.

16. Explain software project estimation in detail.

17. Discuss the design concepts and principles in detail.

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**UG–C–2386** **BCA–12X**

U.G. DEGREE EXAMINATION – DECEMBER, 2023.

Computer Applications

Second Year

COMPUTER ORIENTED NUMERICAL METHODS

Time : 3 hours Maximum marks : 70

PART A — ($3 \times 3 = 9$ marks)

Answer any THREE questions out of Five questions in 100 words.

All questions carry equal marks.

1. Use the Newton Raphson's method to obtain the value of $X_{n-1}$ where $n = 1$ for the equation $x \sin x + \cos x = 0$.

2. Explain Gauss elimination method.

3. Write the Newton's forward difference Interpolation formula.

4. What is the meaning of Numerical Integration?

5. Give example of arithmetic operations possible with Normalized floating point numbers.

PART B — ($3 \times 7 = 21$ marks)

Answer any THREE questions out of Five questions in 200 words.

All questions carry equal marks.

6. Explain about the Secant method.

7. What is Pivoting? Explain.

8. Using Lagrange's formula find $y(11)$ from the following table

| | | | | |
|---|---|---|---|---|
| X | 6 | 7 | 10 | 32 |
| Y | 13 | 14 | 15 | 17 |

9. Explain Runge - Kutta second-order method.

10. What are the practical applications of Simpson's rule?

PART C — ($4 \times 10 = 40$ marks)

Answer any FOUR questions out of Seven questions in 500 words.

All questions carry equal marks.

11. Solve $x + \log x - 1.2 = 0$ for the root between $x = 2$ and $x = 3$ by using Bisection Method.

12. Solve the equation by Gauss - Jordan method

$2x_1 + x_2 - x_3 = -2$

$x_2 + 2x_3 = 2$

$x_1 - x_2 + x_3 = 5$

13. Explain the principle of least squares with neat sketches.

14. Find an approximate value of $\log_c 5$ by calculating to 4 decimal places by Simpson's rule the integral $\int_0^5 \frac{dx}{4x+5}$, dividing the range into 10 equal parts.

15. Compute $y$ for $x = 0.2$ and 0.4 given $y' = y - \frac{2x}{y}, y(0) = 1$ using Runge - Kutta fourth order.

16. Determine the root of $xe^x - 3 = 0$ correct to three decimal places, using the method of false position.

17. Explain in detail about linear regression and polynomial regression.

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