(2024 Batch Onwards)

IT3AUDC250 Reg. No.: | | | | | | | | |

St Aloysius (Deemed to be University)

Mangaluru

School of Information Science and Technology

(UG Programme)

B.C.A. - Semester IV – Degree Examination

April/May - 2026

PYTHON PROGRAMMING

Time: 2 ½ Hours **Max Marks: 60**

SECTION – A

Answer any FIVE of the following. **(5x2=10)**

1. What is the difference between zeros() and ones() functions in NumPy?
2. How does the while loop work in Python?
3. How to create an empty class or function in Python?
4. What are Access Specifiers in Python?
5. Define function. What are the advantages of using a function?
6. How to create a tuple with one element?
7. Explain the use of range() function with an example.
8. Define Dataframe in Pandas.

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SECTION - B

Answer any TEN of the following. **(10x5=50)**

9. List and explain any six salient features of Python.
10. Differentiate between C and Python
11. How can you process an array in Python? Explain with examples of iteration, searching, and sorting in arrays.
12. Explain the following methods with respect to strings with syntax and examples.
    i) Split() ii) join()
13. Briefly describe a dictionary. Illustrate with suitable examples how to create a dictionary and the various ways of accessing the keys and values in the dictionary.
14. Explain the ways of indexing and slicing the list with examples.
15. Write a program to create an intersection, union, set difference, and symmetric difference of sets.
16. Write a python code to search an employee record from employee (empno, empname, empsalary) table by reading employee number from the user. (assume the data types)
17. Explain function overloading and overriding with suitable examples.
18. What is a class? How to define class in python? How to initiate a class and how the class members are accessed?
19. What is the lambda function? Explain with an example of addition of two numbers.
20. What is Pandas in Python? Explain its significance in data analysis and how it compares to NumPy.

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Mapping of Questions with Bloom's Level and Course Outcomes (COs)

Section	A								B											
Q. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Bloom's Level	L2	L2	L3	L2	L2	L1	L2	L1	L1	L2	L3	L3	L2	L3	L3	L3	L4	L3	L3	L4
Mapped CO(s)	CO1	CO1	CO3	CO3	CO3	CO2	CO1	CO4	CO1	CO1	CO1	CO2	CO2	CO2	CO2	CO4	CO3	CO3	CO3	CO4

(2024 Batch Onwards)

IT3AUDC251 Reg. No.: | | | | | | | | |

St Aloysius (Deemed to be University)

Mangaluru

School of Information Science and Technology

(UG Programme)

B.C.A. - Semester IV – Degree Examination

April/May - 2026

WEB PROGRAMMING USING PHP

Time: 2 ½ Hours **Max Marks: 60**

SECTION – A

Answer any FIVE of the following. **(5x2=10)**

1. What is a function in PHP? Write the syntax for defining a function in PHP.
2. What is a session? How do you remove a session variable?
3. What is the difference between GET and POST method?
4. How do you create an indexed array?
5. What is the purpose of mysqli_fetch_assoc()?
6. What is the difference between == and ===?
7. Name any two types of errors in PHP.
8. Write any two text formatting tags in HTML. Give an example for each.

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SECTION - B

Answer any TEN of the following. **(10x5=50)**

9. How to create tables in HTML? Explain with example.
10. Explain class selector and ID selector with suitable examples.
11. Which are the three ways of inserting CSS into an HTML document? Explain with example.
12. With syntax and example, explain any five numeric functions in PHP with examples.
13. Explain different types of arrays in PHP with examples.
14. Explain conditional statements in PHP with examples.
15. What are constructors and destructors? Explain with example.
16. What is overriding? Explain with suitable example.
17. Explain exception handling in PHP with example.
18. What is a cookie? List and explain cookies with attributes.
19. Explain how to access MySQL using MySQL client and phpMyAdmin.
20. Explain MySQL data types with examples.

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Mapping of Questions with Bloom's Level and Course Outcomes (COs)

Section	A								B											
Q. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Blooms Level	L1	L2	L4	L3	L2	L4	L1	L3	L2	L3	L3	L3	L2	L3	L3	L3	L3	L2	L2	L3
Mapped CO(s)	3	4	2	3	4	2	3	1	1	3	2	2	2	2	3	3	3	4	4	4

(2024 Batch Onwards)

IT3AUDC252 Reg. No.: | | | | | | | | |

St Aloysius (Deemed to be University)

Mangaluru

School of Information Science and Technology

(UG Programme)

B.C.A. - Semester IV – Degree Examination

April/May - 2026

SOFTWARE ENGINEERING

Time: 2 ½ Hours **Max Marks: 60**

SECTION – A

Answer any FIVE of the following. **(5x2=10)**

1. Describe the importance of software engineering in software development.
2. What is meant by functional requirement? Give example.
3. Design the state transition diagram for login module.
4. What is object aggregation? Give example.
5. Justify the needs of Abstraction.
6. What is meant by regression testing?
7. Analyse any two challenges faced in software maintenance.
8. Analyse the term code review along with its types.

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SECTION - B

Answer any TEN of the following. **(10x5=50)**

9. "Feasibility study is must in software development". Justify this in detail.
10. Explain prototype development model with its advantages and disadvantages.
11. Explain the different components of SRS document.
12. Draw level 0 and level 1 DFD for online food ordering system.
13. List and explain the reliability metrics in software engineering.
14. Explain the objectives of SQA.
15. What do you mean by coupling? Explain different types of coupling.
16. Explain Unit testing method along with procedures.
17. Distinguish between white box testing and black box testing.
18. Explain various categories of debugging.
19. Analyse the different categories of software maintenance.
20. What is software configuration management? Justify its importance in software project.

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Mapping of Questions with Bloom's Level and Course Outcomes (COs)

Part	A								B											
Q. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Blooms Level	L1	L1	L6	L1	L5	L3	L4	L4	L5	L2	L6	L2	L2	L2	L1	L2	L4	L2	L4	L5
Mapped CO(s)	CO 1	CO 1	CO 2	CO 2	CO 3	CO 3	CO 4	CO 4	CO 1	Co 1	CO 1	CO 2	CO 2	CO 2	CO 3	CO 3	CO 3	CO 4	CO 4	CO 4

(2024 batch onwards)

AH4DUAE231 Reg. No: | | | | | | | |

St Aloysius (Deemed to be University)
Mangaluru
SCHOOL OF ARTS AND HUMANITIES
(UG PROGRAMME)
B.A./B.Sc./B.C.A. - Semester IV – Degree Examination
April / May - 2026

Ability Enhancement Compulsory Course
Constitution of India And Value Education

Time: 2½ Hours **Max. Marks: 60**

PART – A

Constitution of India

I. Answer any FIVE of the following questions. **(5x2=10)**

1. Define secularism. When was this term added to the Preamble of the Indian Constitution?
   ಧರ್ಮನಿರಪೇಕ್ಷತೆ ಎಂದರೆ ಏನು? ಈ ಪದವನ್ನು ಭಾರತದ ಸಂವಿಧಾನದ ಪ್ರಸ್ತಾವಿಕೆಯಲ್ಲಿ ಯಾವಾಗ ಸೇರಿಸಲಾಯಿತು?
2. What do you mean by Directive Principles of State Policy? From which country were they borrowed?
   ರಾಜ್ಯದ ನಿರ್ದೇಶಕ ತತ್ವಗಳು ಎಂದರೆ ಏನು? ಇವುಗಳನ್ನು ಯಾವ ದೇಶದಿಂದ ಎರವಲು ಪಡೆದಿದ್ದೇವೆ?
3. Who appoints the Chief Minister in India? Name the present Chief Minister of Karnataka.
   ಭಾರತದಲ್ಲಿ ಮುಖ್ಯಮಂತ್ರಿ ಯನ್ನು ಯಾರು ನೇಮಿಸುತ್ತಾರೆ? ಕರ್ನಾಟಕದ ಪ್ರಸ್ತುತ ಮುಖ್ಯಮಂತ್ರಿಯ ಹೆಸರನ್ನು ತಿಳಿಸಿ.
4. What is impeachment? Can a Governor be removed through the impeachment process?
   ದೋಷಾರೋಪಣೆ ಎಂದರೆ ಏನು? ರಾಜ್ಯಪಾಲರನ್ನು ದೋಷಾರೋಪಣೆ ಪ್ರಕ್ರಿಯೆಯ ಮೂಲಕ ತೆಗೆದುಹಾಕಬಹುದೇ?
5. State any two functions of the Speaker of the Lok Sabha.
   ಲೋಕಸಭೆಯ ಸ್ಪೀಕರ್‌ನ ಯಾವುದಾದರೂ ಎರಡು ಕಾರ್ಯಗಳನ್ನು ತಿಳಿಸಿ.
6. What is unicameralism? Name any one unicameral state in India.
   ಏಕಸದನ ವ್ಯವಸ್ಥೆ ಎಂದರೆ ಏನು? ಭಾರತದ ಯಾವುದಾದರೂ ಒಂದು ಏಕಸದನವನ್ನು ಹೊಂದಿರುವ ರಾಜ್ಯದ ಹೆಸರನ್ನು ಹೆಸರಿಸಿರಿ.
7. Mention any two electoral reforms implemented in India.
   ಭಾರತದಲ್ಲಿ ಜಾರಿಗೊಂಡ ಯಾವುದಾದರೂ ಎರಡು ಚುನಾವಣಾ ಸುಧಾರಣೆಗಳನ್ನು ತಿಳಿಸಿ.
8. Expand RTI and PIL
   RTI ಮತ್ತು PIL ನ ಪೂರ್ಣ ರೂಪವನ್ನು ಬರೆಯಿರಿ.

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II. Answer any FIVE of the following questions. **(5x5=25)**

9. Write a note on Constituent Assembly.
   ಸಂವಿಧಾನ ರಚನಾ ಸಭೆಯ ಬಗ್ಗೆ ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.
10. In **Bijoe Emmanuel & Others v. State of Kerala (1986)**, three children belonging to the Jehovah's Witnesses faith refused to sing the National Anthem due to their religious beliefs but stood respectfully. The school expelled them, but the Supreme Court ruled in children's favour.
    A. Identify and explain any one Fundamental Right upheld in this case. (2 Marks)
    B. Analyze any three reasonable restrictions on the Right to Freedom under Article 19(1)(a). (3 Marks)

Contd...2

Bijoe Emmanuel & Others v. State of Kerala (1986) ಪ್ರಕರಣದಲ್ಲಿ, ಮೂರು ಮಕ್ಕಳು ತಮ್ಮ ಧಾರ್ಮಿಕ ನಂಬಿಕೆಯ ಕಾರಣ ರಾಷ್ಟ್ರಗೀತೆಯನ್ನು ಹಾಡಲು ನಿರಾಕರಿಸಿದರು, ಆದರೆ ಗೌರವದಿಂದ ನಿಂತಿದ್ದರು. ಶಾಲೆಯು ಅವರನ್ನು ಹೊರಹಾಕಿತು, ಆದರೆ ಸುಪ್ರೀಂ ಕೋರ್ಟ್ ಮಕ್ಕಳ ಪರವಾಗಿ ತೀರ್ಪು ನೀಡಿತು.

A. ಈ ಪ್ರಕರಣದಲ್ಲಿ ರಕ್ಷಿಸಲಾದ ಯಾವುದಾದರೂ ಒಂದು ಮೂಲಭೂತ ಹಕ್ಕನ್ನು ಗುರುತಿಸಿ ಮತ್ತು ವಿವರಿಸಿ. (2 ಅಂಕಗಳು)

B. ವಿಧಿ 19(1)(a) ಅಡಿಯಲ್ಲಿ ಸ್ವಾತಂತ್ರ್ಯದ ಹಕ್ಕಿನ ಮೇಲೆ ಇರುವ ಯಾವುದಾದರೂ ಮೂರು ಸಮಂಜಸ ನಿರ್ಬಂಧಗಳನ್ನುವಿಶ್ಲೇಷಿಸಿ. (3 ಅಂಕಗಳು)

11. Explain the procedure for the election of the President of India.
ಭಾರತದ ರಾಷ್ಟ್ರಪತಿಯನ್ನು ಆಯ್ಕೆ ಮಾಡುವ ವಿಧಾನವನ್ನು ವಿವರಿಸಿ.
12. Explain the powers and functions of the Prime Minister of India.
ಭಾರತದ ಪ್ರಧಾನಮಂತ್ರಿಯ ಅಧಿಕಾರ ಮತ್ತು ಕಾರ್ಯಗಳನ್ನು ವಿವರಿಸಿ.
13. Describe the composition and original jurisdiction of the Supreme Court.
ಸುಪ್ರೀಂ ಕೋರ್ಟ್‌ನ ರಚನೆ ಮತ್ತು ಮೂಲ ನ್ಯಾಯವ್ಯಾಪ್ತಿಯನ್ನು ವಿವರಿಸಿ.
14. Examine the functions of the 73rd Constitutional Amendment.
73ನೇ ಸಂವಿಧಾನ ತಿದ್ದುಪಡಿಯ ಕಾರ್ಯಗಳನ್ನು ಪರಿಶೀಲಿಸಿ.
15. Explain the functions of the Election Commission of India.
ಭಾರತದ ಚುನಾವಣಾ ಆಯೋಗದ ಕಾರ್ಯಗಳನ್ನು ವಿವರಿಸಿ.

III. Answer any <u>ONE</u> of the following question. **(1x10=10)**

16. Critically examine the sallent features of the Indian Constitution.
ಭಾರತೀಯ ಸಂವಿಧಾನದ ಪ್ರಮುಖ ಲಕ್ಷಣಗಳನ್ನು ಟೀಕಾತ್ಮಕವಾಗಿ ಪರಿಶೀಲಿಸಿ ಬರೆಯಿರಿ.
17. Evaluate the powers of the President of India.
ಭಾರತದ ರಾಷ್ಟ್ರಪತಿಯ ಅಧಿಕಾರಗಳನ್ನು ಮೌಲೀಕರಿಸಿ ಬರೆಯಿರಿ.
18. Explain the composition and powers of the Parliament of India.
ಭಾರತದ ಸಂಸತ್ತಿನ ರಚನೆ ಮತ್ತು ಅಧಿಕಾರಗಳನ್ನು ವಿವರಿಸಿ.

PART – B
VALUE EDUCATION (IV semester)

IV. Answer any <u>ONE</u> of the following in not less than a page. **(1x5=5)**

19. Suggest various methods to promote religious harmony in Mangaluru.
ಮಂಗಳೂರು ನಗರದಲ್ಲಿ ಧಾರ್ಮಿಕ ಸಾಮರಸ್ಯವನ್ನು ಉತ್ತೇಜಿಸಲು ವಿವಿಧ ವಿಧಾನಗಳನ್ನು ಸೂಚಿಸಿ.
20. Define sustainable development and explain its key principles.
ಸುಸ್ಥಿರ ಅಭಿವೃದ್ಧಿ ಎಂದರೆ ಏನು? ಅದರ ಪ್ರಮುಖ ತತ್ವಗಳನ್ನು ವಿವರಿಸಿ.

V. Answer any <u>ONE</u> of the following in not less than two pages. **(1x10=10)**

21. Define professional ethics and explain its key attributes.
ವೃತ್ತಿ ನೈತಿಕತೆ ಎಂದರೆ ಏನು? ಅದರ ಪ್ರಮುಖ ಲಕ್ಷಣಗಳನ್ನು ವಿವರಿಸಿ.
22. Critically analyze the obstacles to take individual responsibility in society.
ಸಮಾಜದಲ್ಲಿ ವೈಯಕ್ತಿಕ ಜವಾಬ್ದಾರಿಯನ್ನು ತೆಗೆದುಕೊಳ್ಳಲು ಇರುವ ಅಡೆತಡೆಗಳನ್ನು ಟೀಕಾತ್ಮಕವಾಗಿ ವಿಶ್ಲೇಷಿಸಿ.

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Mapping of Questions with Bloom's Level and Course Outcomes (COs)

	A																		B			
Q. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Blooms Level	1	1	1	2	1	2	1	1	2	4	2	2	2	4	2	5	5	2	3	2	2	4
Mapped CO(s)	1	1	2	2	3	1	4	4	2	1	3	3	2	4	3	1	3	3	4	4	4	4

(2024 Batch Onwards)

CF5AUSE228 Reg. No.: | | | | | | | | |

St Aloysius (Deemed to be University)

Mangaluru

SCHOOL OF COMMERCE, FINANCE AND ACCOUNTANCY

(UG PROGRAMME)

B.A./B.Sc./B.C.A.–Semester IV- Degree Examination

April/May – 2026

(Skill Enhancement Course)

FINANCIAL EDUCATION AND INVESTMENT AWARENESS

Time: $1^1/_2$ Hours **Max Marks: 30**

SECTION – A

Answer any FIVE of the following. **(5x2=10)**

1. Expand the term GDP.
2. In which year RBI was established?
3. What is a mutual fund?
4. Write a note on NPS.
5. What is Bond.
6. Expand PMKMDY.
7. What is a credit card?

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SECTION - B

Answer any TWO of the following. **(2x5=10)**

8. Explain any five needs for banking in India.
9. Explain any five micro environment factors influencing investment decisions.
10. Describe the criteria for selection of Mutual Funds.
11. What is Demat Account?

SECTION – C

Answer any ONE of the following. **(1x10=10)**

12. Calculate: a) i) Future Value of ₹12,000 at 5% p.a. for 4 years ii) Present Value of ₹18,000 receivable after 3 years at 10% p.a.
    b) Write a note on NEFT and RTGS
13. Explain fundamental analysis.

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Mapping of Questions with Bloom's Level and Course Outcomes (COs)

Part	A							B				C	
Q. No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Blooms Level	1	1	1	1	1	1	1	4	4	4	2	3	4
Mapped CO(s)	1	1	2	3	3	3	1	1	1	2	3	1	2