

**5 MJ 60515 B**

FOUR YEAR B.Sc. (Honours) DEGREE EXAMINATION, NOVEMBER/DECEMBER 2025.

FIFTH SEMESTER

Computer Science

Course 15 B – APPLICATION DEVELOPMENT USING PYTHON

(w.e.f. 2023-2024 Regulations)

Time : Three hours

Maximum : 70 marks

(No additional sheet will be supplied)

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SECTION A — (5 × 4 = 20 marks)

Answer any FIVE questions.

1. Explain Python objects and standard types with examples.
2. Describe integers, floating point, and complex numbers in Python.
3. Explain control flow in Python with an example.
4. Describe built-in file functions in Python.
5. Explain handling exceptions in Python with examples.
6. Describe special symbols and characters in Python regular expressions.
7. Explain GUI programming using Tkinter in Python.
8. Describe creating simple web clients in Python.
9. Explain the role of Python DBAPI in database programming.
10. Describe object relational mappers (ORMs) with examples.

SECTION B — (5 × 10 = 50 marks)

Answer ALL questions.

11. Explain categorizing Python's standard operators with examples.

Or

12. Describe different sequences in Python.
13. Explain file execution and command-line arguments in Python with examples.

Or

14. Describe exception handling in Python with an example.

15. Explain regular expressions in Python with suitable examples.

Or

16. Discuss multithreaded programming in Python and the role of the Global Interpreter Lock (GIL).

17. Explain advanced CGI in Python with an example.

Or

18. Discuss building web (HTTP) servers using Python.

19. Explain the Python Database API (DBAPI) and its importance.

Or

20. Describe object relational mappers (ORMs) and give an example.

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