

MCQ for Python Users

*Get ready for computer science
examinations with 5000+ Python MCQ*

Dr. Brijesh Bakariya

Dr. Krishna Kumar Mohbey



www.bpbonline.com

First Edition 2024

Copyright © BPB Publications, India

ISBN: 978-93-55517-739

All Rights Reserved. No part of this publication may be reproduced, distributed or transmitted in any form or by any means or stored in a database or retrieval system, without the prior written permission of the publisher with the exception to the program listings which may be entered, stored and executed in a computer system, but they can not be reproduced by the means of publication, photocopy, recording, or by any electronic and mechanical means.

LIMITS OF LIABILITY AND DISCLAIMER OF WARRANTY

The information contained in this book is true to correct and the best of author's and publisher's knowledge. The author has made every effort to ensure the accuracy of these publications, but publisher cannot be held responsible for any loss or damage arising from any information in this book.

All trademarks referred to in the book are acknowledged as properties of their respective owners but BPB Publications cannot guarantee the accuracy of this information.

To View Complete
BPB Publications Catalogue
Scan the QR Code:



www.bpbonline.com

[Kup książkę](#)

Dedicated to

*Our family members who have supported us in all respects of life and career.
Our journey proved to be a boon by following their words and experiences.*

About the Authors

- **Dr. Brijesh Bakariya** is an Assistant Professor in the Department of Computer Science and Engineering, I.K. Gujral Punjab Technical University (IKGPTU) Campus Hoshiarpur, Punjab. He completed his Ph. D. at Maulana Azad National Institute of Technology (NIT- Bhopal), Madhya Pradesh (2016). He received an MCA Degree from Devi Ahilya Vishwavidyalaya, Indore, Madhya Pradesh (2009). He has been teaching since 2009 and guiding M.Tech/Ph.D. students. In the meantime, he has authored three books and published more than 30 research papers in journals of international repute in Data Mining, Machine Learning, Deep Learning, Image Processing, Human Activity Recognition, and so on. He supervised three Ph.D. scholars, and three are working with him. He has attended various short-term training programs, refresher courses, workshops, seminars, and conferences in India.
- **Dr. Krishna Kumar Mohbey** is an Assistant Professor of Computer Science at the Central University of Rajasthan, India. He received his Bachelor's degree in Computer Applications from MCRPV Bhopal (2006), Master's in Computer Applications from Rajiv Gandhi Technological University Bhopal (2009), and Ph.D. from the Department of Mathematics and Computer Applications from National Institute of Technology Bhopal, India (2015). He has been teaching since 2009 and guiding Ph.D. students. His areas of interest are Machine learning, data mining, mobile web services, big data analysis, POI Recommendations, and user behavior analysis. He has authored four books on different subjects and published over 50 research articles in reputed journals and conferences.

Acknowledgement

This book culminates a few years of intense learning and research experience. We have been fortunate to interact with many people who have influenced us greatly. One of the pleasures of finally finishing is this opportunity to thank them. We would like to place on record and acknowledge the works of all those great authors whose work we have referred to in preparing this book.

A few people want to thank you for the continued and ongoing support they have given us while writing this book. First and foremost, we would like to thank our family members for continuously encouraging us to write the book — we could have never completed this book without their support.

We are also grateful to BPB Publications for their guidance and expertise in bringing this book to fruition. Revising this book was a long journey, with valuable participation and collaboration of reviewers, technical experts, and editors.

We would also like to acknowledge the valuable contributions of our colleagues and co-workers during many years working in academics, who have taught us so much and provided valuable feedback on this work.

Finally, we would like to thank all the readers who have taken an interest in our book and for their support in making it a reality. Your encouragement has been invaluable.

Preface

Bringing the book “**MCQ for Python Users**” gives us immense pleasure. Python is the most popular programming language and is widely used among programmers. The book is intended for the students of various courses who can use this high-level programming language as an effective tool for Problem-solving. Python is used to develop applications of any stream and is not restricted only to computer science. This book contains more than 5000 MCQ questions and answer keys.

These questions and answers serve as a means to assess your proficiency in Python programming. If you possess prior knowledge of Python, you can utilize it to ascertain the number of queries you can independently try without assistance. Before your job interview, it would be advisable to review these questions. For teachers or tutors instructing Python, these multiple-choice questions (MCQ) serve as a valuable assessment tool to gauge the extent to which pupils have grasped the material given. The intended difficulty level of the questions is aimed at those who are at the Beginner Level in Python, either those who are just beginning to study Python or those who have recently acquired knowledge in Python. The book also provides answers to all the questions.

This book is for everyone from an engineering and science background. It is also for B.Tech. B.E., BCA, BSc, M.Tech, PGDCA, M.E., MCA, M.Com., MSc, Ph.D., other UG graduates, and PG graduates. With this book, you will gain the knowledge and skills in Python. We hope you will find this book informative and helpful.

The book is divided into 20 chapters covering MCQs of all aspects of Problem-Solving with Python with a touch of Machine Learning. The details are listed below.

Chapter 1: Fundamentals of Programming – This chapter contains MCQ related to the basics of programming, including language translators, instructions, and various types of statements.

Chapter 2: Introduction to Python – It presents MCQ for Python basics, installation, program writing, and executions.

Chapter 3: Data type, Operators, and Expressions – It covers various MCQs related to Python data types, operators, and different expressions.

Chapter 4: Control Flow Statements – MCQs related to conditional and looping statements.

Chapter 5: Functions - This chapter covers various MCQs related to functions that can be used in Python.

Chapter 6: Sequence-String – This chapter focuses on MCQs targeting Python’s sequence manipulation, emphasizing string handling.

Chapter 7: Lists – This chapter includes various List related MCQs.

Chapter 8: Tuples – This chapter includes various MCQs for Tuples.

Chapter 9: Dictionaries – This chapter covers MCQs for dictionary data structure and various operations applied to the dictionary.

Chapter 10: File Handling – Python provides a built-in feature to build, write, and read files. This chapter includes MCQs related to various operations that are used on files.

Chapter 11: Exception Handling – This chapter highlights MCQs related to the exception-handling functionality of Python.

Chapter 12: Modules – It includes Python module-related MCQs.

Chapter 13: Packages – It includes MCQs related to Python packages.

Chapter 14: Object-oriented Programming – This chapter covers MCQs related to Python's object-oriented programming.

Chapter 15: Graphical User Interfaces in Python – This chapter contains MCQs for Python's GUI programming. Questions are related to tkinter, widgets, frames, and application designing.

Chapter 16: Machine Learning with Python – covers MCQs related to various machine learning concepts.

Chapter 17: Clustering with Python – This chapter's MCQ explores the concept and methodologies of clustering algorithms using the Python programming language.

Chapter 18: Applications of Python – It includes MCQs related to various Python applications. Questions include data analysis, machine learning, web development, automation, and more.

Chapter 19: Python Error Finding MCQ – The collection of MCQs focused on identifying and resolving errors in Python code.

Chapter 20: Database Programming with Python – It includes various MCQs related to database handling through Python programming.

Errata

We take immense pride in our work at BPB Publications and follow best practices to ensure the accuracy of our content to provide with an indulging reading experience to our subscribers. Our readers are our mirrors, and we use their inputs to reflect and improve upon human errors, if any, that may have occurred during the publishing processes involved. To let us maintain the quality and help us reach out to any readers who might be having difficulties due to any unforeseen errors, please write to us at :

errata@bpbonline.com

Your support, suggestions and feedbacks are highly appreciated by the BPB Publications' Family.

Did you know that BPB offers eBook versions of every book published, with PDF and ePub files available? You can upgrade to the eBook version at www.bpbonline.com and as a print book customer, you are entitled to a discount on the eBook copy. Get in touch with us at :

business@bpbonline.com for more details.

At **www.bpbonline.com**, you can also read a collection of free technical articles, sign up for a range of free newsletters, and receive exclusive discounts and offers on BPB books and eBooks.

Piracy

If you come across any illegal copies of our works in any form on the internet, we would be grateful if you would provide us with the location address or website name. Please contact us at **business@bpbonline.com** with a link to the material.

If you are interested in becoming an author

If there is a topic that you have expertise in, and you are interested in either writing or contributing to a book, please visit **www.bpbonline.com**. We have worked with thousands of developers and tech professionals, just like you, to help them share their insights with the global tech community. You can make a general application, apply for a specific hot topic that we are recruiting an author for, or submit your own idea.

Reviews

Please leave a review. Once you have read and used this book, why not leave a review on the site that you purchased it from? Potential readers can then see and use your unbiased opinion to make purchase decisions. We at BPB can understand what you think about our products, and our authors can see your feedback on their book. Thank you!

For more information about BPB, please visit **www.bpbonline.com**.

Join our book's Discord space

Join the book's Discord Workspace for Latest updates, Offers, Tech happenings around the world, New Release and Sessions with the Authors:

<https://discord.bpbonline.com>



Kup książkę

Table of Contents

1. Fundamentals of Programming	1
Introduction	1
Objectives	1
Multiple choice questions	1
Conclusion	22
Answers	24
2. Introduction to Python	25
Introduction	25
Objectives	25
Multiple choice questions	25
Conclusion	50
Answers	51
3. Data types, Operators, and Expressions	52
Introduction	52
Objectives	52
Multiple choice questions	52
Conclusion	69
Answers	70
4. Control Flow Statements.....	71
Introduction	71
Objectives	71
Multiple choice questions	72
Conclusion	95
Answers	96
5. Functions	97
Introduction	97
Objectives	97
Multiple choice questions	97
Conclusion	118
Answers	119
6. Sequence-String.....	120
Introduction	120
Objectives	120

Multiple choice questions	120
Conclusion	138
Answers	139
7. Lists	140
Introduction	140
Objectives	140
Multiple choice questions	140
Conclusion	164
Answers	165
8. Tuples	166
Introduction	166
Objectives	166
Multiple choice questions	166
Conclusion	185
Answers	186
9. Dictionaries	187
Introduction	187
Objectives	187
Multiple choice questions	187
Conclusion	209
Answers	210
10. File Handling	211
Introduction	211
Objectives	211
Multiple choice questions	211
Conclusion	230
Answers	231
11. Exception Handling	232
Introduction	232
Objectives	232
Multiple choice questions	232
Conclusion	255
Answers	256
12. Modules	257
Introduction	257
Objectives	257

Multiple choice questions	257
Conclusion	277
Answers	278
13. Packages	279
Introduction	279
Objectives	279
Multiple choice questions	279
Conclusion	300
Answers	301
14. Object-oriented Programming	302
Introduction	302
Objectives	302
Multiple choice questions	302
Conclusion	326
Answers	327
15. Graphical User Interfaces in Python	328
Introduction	328
Objectives	328
Multiple choice questions	328
Conclusion	346
Answers	347
16. Machine Learning with Python	348
Introduction	348
Objectives	348
Multiple choice questions	348
Conclusion	376
Answers	377
17. Clustering with Python	378
Introduction	378
Objectives	378
Multiple choice questions	378
Conclusion	400
Answers	401
18. Applications of Python	402
Introduction	402
Objectives	402

Multiple choice questions	402
Conclusion	421
Answers	422
19. Python Error Finding MCQ.....	423
Introduction	423
Objectives	423
Multiple choice questions	423
Conclusion	458
Answers	459
20. Database Programming with Python	460
Introduction	460
Objectives	460
Multiple choice questions	460
Conclusion	482
Answers	483

CHAPTER 1

Fundamentals of Programming

Introduction

Programming serves as the fundamental pillar of our progressively computerized society. The software that operates our computers, mobile devices, and the other interconnected networks that constitute our contemporary existence is fueled by this force. Acquiring proficiency in the art and science of programming empowers individuals with a formidable instrument for problem-solving, work automation, and the realization of creative concepts. This chapter starts the process of developing **Multiple-Choice Questions (MCQs)** that center around the core principles of programming. The MCQs provided here are intended to be a beneficial tool for individuals seeking to enhance their knowledge, instructors aiming to facilitate learning, and those with an interest in comprehending the fundamental principles that form the basis of programming. The importance of these MCQs resides in their capacity to evaluate, strengthen, and enhance an individual's understanding of programming concepts. Whether one is an inexperienced individual on their programming journey or an experienced developer aiming to review fundamental concepts, the following inquiries offer a systematic approach for self-evaluation and knowledge acquisition.

Objectives

The objective of this chapter, titled *Fundamentals of Programming MCQs*, is to enhance the knowledge and skills of learners and instructors in the programming field. It aims to offer a systematic and interactive approach to comprehending the fundamental ideas that underpin the realm of coding and software development.

Multiple choice questions

1. Which translator program is responsible for converting an assembly language program into an equivalent Machine Language program?
 - a. Compiler
 - b. Linker
 - c. Assembler
 - d. Interpreter
2. An _____ is a symbol representing a particular operation that can be performed on data.
 - a. Operand
 - b. Operator
 - c. Expression
 - d. None of the above

3. Which one of the following programming languages is machine-independent?
 - a. High level language
 - b. Machine language
 - c. Assembly language
 - d. All the above
4. Which of the languages is said to be a high-level language?
 - a. C++
 - b. Java
 - c. C
 - d. All the above
5. Which of the following translates the source program statements into object codes?
 - a. Compiler
 - b. Debugger
 - c. Interpreter
 - d. Assembler
6. What is the primary purpose of a variable in programming?
 - a. To store and manipulate data
 - b. To control the flow of the program
 - c. To display output to the user
 - d. To comment on code
7. Which of the following data types is not typically used to store numeric values?
 - a. int
 - b. string
 - c. float
 - d. double
8. What does the term algorithm mean when applied to computer programming?
 - a. A programming language
 - b. A step-by-step procedure for solving a problem
 - c. A computer's memory
 - d. A type of data structure
9. Which control structure is used to repeat a block of code until a certain condition is met?
 - a. if statement
 - b. for loop
 - c. switch statement
 - d. function
10. What is the purpose of the if-else statement in programming?
 - a. To define a function
 - b. To execute a block of code only if a condition is true, and another block, if it is false
 - c. To declare a variable
 - d. To create a loop
11. Which of the following is not a valid programming language?
 - a. Python
 - b. JavaScript
 - c. HTML
 - d. C++
12. What is the purpose of the while loop in programming?
 - a. To iterate over a sequence of values
 - b. To execute a block of code a specified number of times
 - c. To define a function
 - d. To check a condition and repeat the code if the condition is true
13. In programming, what do you understand by a function?
 - a. A piece of code that prints text to the screen
 - b. A container for storing data
 - c. A reusable block of code that performs a specific task
 - d. A type of loop
14. What does the term syntax error refer to, in programming?
 - a. A logical error in the code
 - b. A mistake in the program's output
 - c. An error in the program's design
 - d. A violation of the programming language's rules
15. Which data structure uses the LIFO principle?
 - a. Queue
 - b. Stack
 - c. Linked list
 - d. Array

16. What does the acronym IDE stand for in the context of programming?
 - a. Integrated Design Environment
 - b. Integrated Development Environment
 - c. Interconnected Development Environment
 - d. Interactive Developer Environment
17. Which of the following is not a valid programming paradigm?
 - a. Object-Oriented Programming
 - b. Functional Programming
 - c. Procedural Programming
 - d. Circular Programming
18. In programming, what is a compiler?
 - a. A program that converts source code into machine code
 - b. A program used for debugging code
 - c. A program that generates random numbers
 - d. A program that displays output on the screen
19. Various programming languages use this operator to assign a value to a variable:
 - a. +
 - b. =
 - c. :
 - d. *
20. What is the purpose of a comment in code?
 - a. To specify the input data
 - b. To improve the program's performance
 - c. To explain or document the code for human readers
 - d. To declare a variable
21. Which programming construct allows a program to make decisions and execute different codes based on conditions?
 - a. Loop
 - b. Function
 - c. Control structure
 - d. Conditional statement
22. What is the term for a named storage location in memory that holds a value?
 - a. Function
 - b. Variable
 - c. Operator
 - d. Constant
23. Which of the following is a valid way to represent a single-line comment in Python?
 - a. /* This is a comment */
 - b. // This is a comment
 - c. # This is a comment
 - d. <!-- This is a comment -->
24. What is the result of $5 \% 2$ in most programming languages?
 - a. 2.5
 - b. 2
 - c. 1.5
 - d. 1
25. In object-oriented programming, what is a class?
 - a. A function that performs a specific task
 - b. A template or blueprint for creating objects
 - c. A data structure used to store multiple values
 - d. An error in the code
26. What is the primary purpose of the break statement in a loop?
 - a. To terminate the program
 - b. To exit the loop and continue with the next iteration
 - c. To print a message to the console
 - d. To create a new loop
27. In programming, what is a parameter or argument in the context of functions?
 - a. A variable declared inside a function
 - b. A variable used to store user input
 - c. A value passed into a function when it is called
 - d. A reserved keyword