UTTAR PRADESH RAJARSHI TANDON OPEN UNIVERSITY

SHANTIPURAM, SECTOR-F, PHAPHAMAU, PRAYAGRAJ-211021

ASSIGNMENT QUESTION PAPER

Session: 2026-27	**Max. Marks: 30**
Program Name: Bachelor of Science	
Course Code: UGCS- 101(N)	**Course Name: Computer Fundamental and PC software**

Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	What are different input/output (I/O) devices in a computer?	2
2	What are Toolbars and Menus of MS Excell Worksheet? Differentiate between serial and parallel port.	2
3	What are different types of MS word Tools?	2
4	What do you mean by mail merge?	2
5	What are the DOS commands? list any five	2
6	How you can convert Hexadecimal to Binary number system?	2
	Long answer type question (approx. 500 -800 words)	Marks
7	Explain the different generations of computer? List some of the applications areas of computer	6
8	What are Main functions of OS? Explain the different type of OS .	6
9	Explain with examples, the different types of number system used in computer . Discuss the step of conversion between different number system	6

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ASSIGNMENT QUESTION PAPER

Session: 2026-27	**Max. Marks: 30**
Program Name: Bachelor of Science	
Course Code: UGCS- 102(N)	**Course Name: C Programming**

Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	Explain the differences between static and auto variables, with example of each.	2
2	Differentiate between structure and Union by using example	2
3	Explain the syntax of do-while statement. Also differentiate do-while from while Statement	2
4	What is recursion?	2
5	What are the logical operators in C ?	2
6	Differentiate between call by value and call by reference using example program	2
	Long answer type question (approx. 500 -800 words)	**Marks**
7	What are different basic data types in C ? Explain the need of different numeric data types with example of each.	6
8	What is an array? Write a C program using array to find largest and smallest number from a list of 100 given numbers	6
9	What is function ? Explain. How a function is Called in C ?	6

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ASSIGNMENT QUESTION PAPER

Session: 2026-27	**Max. Marks: 30**
Program Name: Bachelor of Science	
Course Code: SBSCS-02N	**Course Name: Python Programming**

Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	Write Python program to calculate the Arc Length of an Angle by assigning values to the radius and angle data attributes of the class Arc Length	2
2	Describe the different access modes of the files with an example	2
3	Write Python Program to simulate a Bank Account with support for deposit Money, withdraw Money and show Balance Operations.	2
4	Discuss inheritance in Python programming language.	2
5	Write a Program to demonstrate the Overriding of the Base Class method in the Derived Class.	2
6	Write a Python program to demonstrate the use of super() function.	2
	Long answer type question (approx. 500 -800 words)	**Marks**
7	Write Python program to sort words in a sentence in decreasing order of their length. Display the sorted words along with their length	6
8	Discuss the following methods associated with the file object a) read() b) readline() c) readlines(),	6
9	Explain the different string formats available in Python with examples. Discuss the int(), float(), str(), chr() and complex() type conversion functions with examples.	6

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ASSIGNMENT QUESTION PAPER

Session: 2026-27	**Max. Marks: 30**
Program Name: Bachelor of Science	
Course Code: UGCS-103N	**Course Name: Data Structures**

Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	What is a Priority Queue?	2
2	What is a circular queue?	2
3	What is the need for the header?	2
4	What is a doubly linked list?	2
5	Name the three fields of Doubly Linked list?	2
6	Define double circularly linked list?	2
	Long answer type question (approx. 500 -800 words)	Marks
7	What is a Stack? What are the two operations of Stack? Write postfix from of the expression –A+B-C+D?	6
8	What is a Queue? Write down the operations that can be done with queue data structure?	6
9	What is a linked list? What are the different ways to implement list?. What are the advantages in the array implementation of list? Name the two fields of Linked list?	6

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ASSIGNMENT QUESTION PAPER

Session: 2026-27	**Max. Marks: 30**
Program Name: Bachelor of Science	
Course Code: SBSCS-01N	**Course Name: Discrete Mathematics**

Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	Express the Boolean expression $xyz' + y'z + xz'$ in a sum of product form.	2
2	Verify that the proposition p v (P A Q) is a tautology.	2
3	Construct the logic circuit and obtain the logic table for the expression *x1* v (x'2 A x'3)	2
4	How many permutations are there for the word ASSOCIATION ?	2
5	How many numbers are there between 100 and 1000 such that 7 is in the unit's place ?	2
6	Prove De Morgan's laws using truth table.	2
	Long answer type question (approx. 500 -800 words)	**Marks**
7	Explain the following types of relations with the help of suitable examples. a. Reflexive b. Anti symmetric c. Transitive d. Equivalence	6
8	What is the proposition? Explain different logical connectives used in propositions with the help for example	6
9	Draw a Venn diagram to represent followings: (3) i) (A ∩ BU C) ~A ii) (A U B U C) ∩ (B ∩ C)	6

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ASSIGNMENT QUESTION PAPER

Session: 2026-27	**Max. Marks: 30**
Program Name: Bachelor of Science	
Course Code: UGCS-104N	**Course Name: Introduction to Data Base Managment**

Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	What is DBA? Mention the functionalities of DBA	2
2	Discuss in detail about cluster and Multilevel indexes.	2
3	How are views created and dropped? Explain, how the views are implemented and updated	2
4	Discuss 3-tier architecture with necessary diagram and suggest an example application	2
5	State BCNF. How does it differ from 3NF?	2
6	Explain in detail about internal hashing Techniques.	2
	Long answer type question (approx. 500 -800 words)	**Marks**
7	Draw and explain the detailed system architecture of DBMS. What are the advantages of DBMS?	6
8	Discuss the ACID properties of a database transaction with appropriate examples. Draw transaction state diagram and describe each state that a transaction goes through during its execution.	6
9	Explain in detail about various key constraints used in database system. Explain the importance of Null values in Relational Model	6

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ASSIGNMENT QUESTION PAPER

Session: 2026-27	**Max. Marks: 30**
Program Name: Bachelor of Science	
Course Code: UGCS-105N	**Course Name: Computer Network**

Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	Discuss any two benefits of SSL.	2
2	Find the net id and host id of the following IP addresses. 114 . 35 . 2 . 7 133 . 57 . 6 . 8 207 . 34 . 54 . 12	2
3	What is spread spectrum? What are the two types of spread spectrum used in wireless data network? Elaborate.	2
4	What is microwave transmission?	2
5	For n devices in a network, what is the number of cable links, number of full duplex channels for a mesh topology?	2
6	What is silky windows syndrome?	2
	Long answer type question (approx. 500 -800 words)	Marks
7	Explain the OSI reference model with neat diagram.	6
8	How does BGP resolve count to infinity problem?. Explain the operation of hierarchical routing though illustration	6
9	Explain the various types of multiplexing	6

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ASSIGNMENT QUESTION PAPER

Session: 2026-27	**Max. Marks: 30**
Program Name: Bachelor of Science	
Course Code: UGCS-106N	**Course Name: Operating System**

Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	What is demand paging? Explain	2
2	Explain the resource allocation graph	2
3	What are protection goals and principles?	2
4	Explain the methods for deadlock prevention	2
5	What do you mean by a address binding? Explain with the necessary steps, the binding Of instructions and data to memory addresses	2
6	What are threads?	2
	Long answer type question (approx. 500 -800 words)	Marks
7	Define Operating Systems and discuss its role from different perspectives. List out different services of Operating Systems and explain each service	6
8	What is paging and swapping? Explain the paging hardware?	6
9	What is a process? Draw and explain process state diagram	6

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ASSIGNMENT QUESTION PAPER

Session: 2026-27	**Max. Marks: 30**
Program Name: Bachelor of Science	
Course Code: UGCS-108N	**Course Name: C++ and Object Oriented Programming**

Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	Differentiate between method overloading and method overriding with an example	2
2	What is Friend function in C++ ?	2
3	What is Polymorphism ?	2
4	What do you mean by dynamic binding? How it is useful in OOP?	2
5	Write a C++ program to find the length of a given string.	2
6	What do mean by abstract class and container class?	2
	Long answer type question (approx. 500 -800 words)	**Marks**
7	Explain, with suitable examples, the advantage of object oriented language over structured programming language.	6
8	What is constructor? Explain constructor overloading in C++ with an example.	6
9	What is Inheritance? Explain its advantages. Also explain with example how a subclass is derived from a super class in C++?	6

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ASSIGNMENT QUESTION PAPER

Session: 2026-27	**Max. Marks: 30**
Program Name: Bachelor of Science	
Course Code: UGCS-109N	**Course Name: Software Engineering**

Q. No.	Short answer type question (approx. 200 -300 words)	Marks
1	List the characteristics of software contrasting it with characteristics of hardware.	2
2	Summarize the pros and cons of iterative software development model.	2
3	Explain How do we create a process that can manage unpredictability?	2
4	Define agile process .Give any two agile principles.	2
5	Identify the human factors considered for an agile software development	2
6	Is it possible to realize Win-Win spiral model for software. Analyse	2
	Long answer type question (approx. 500 -800 words)	**Marks**
7	Write the IEEE definition of software engineering. Demonstrate your understanding of umbrella activities of a Software process. If you have to develop a word processing software product, what process model will you choose? Justify your answer and examine.	6
8	What do mean by software Testing? Differentiate verification and validation. Give an example.	6
9	What are SDLC in water fall model? .List two deficiencies in waterfall model. Which process model do you suggest to overcome each deficiency?	6