Enrolment No/Seat No.: _____

R.N.G.PATEL INSTITUTE OF TECHNOLOGY-RNGPIT

(An Autonomous College U/s UGC Act 1956)

IMSc-IT. SEMESTER-I, SEMESTER END EXAMINATION - WINTER 2024

Subject Code: 1BS104 **Date: 19-12-2024**

Subject Name: INTRODUCTION TO PROGRAMMING

Time: 11:00 AM to 01:30 PM **Total Marks: 70**

Instructions

1. It is **compulsory** for students to write **Enrolment No. /Seat No.** on the question paper.
2. Write answers of **Section A** and **Section B** in **separate answer books**.
3. Attempt all questions from both **Section A** and **Section B**.
4. Each section carries **35 marks**, with a total of **70 marks** for the examination.
5. The figures to the right of each question indicate full marks, make suitable assumptions with justification.
6. BL - Bloom's Taxonomy Levels (R-Remember, U-Understanding, A –Application, N –Analyze, E – Evaluate, C -Create), CO - Course Outcomes.

SECTION A

		Marks	BL	CO
Q.1	**Objective-Type Questions**	**[05]**		
(a)	What is the correct way of declare a function in C?	**1**	**R**	**4**
	(i) function void myFunction(); **(ii)** void myFunction();			
	(iii) myFunction(): void; **(iv)** void: myFunction();			
(b)	What will the following code print?			

```
Int myFunction() {
        Return 5;
  }
Printf("%d", myFunction());
```

		1	**U**	**4**
	(i) 0 **(ii)** 5			
	(iii) Undefined **(iv)** Compilation error			
(c)	In c, what is a pointer primarily used for?	**1**	**R**	**3**
	(i) Decision Making **(ii)** Code Organization			
	(iii) Variable Declaration **(iv)** Storing Values			
(d)	Which is not a correct function declaration?	**1**	**U**	**4**
	(i) int funct(char x, char y); **(ii)** double funct(x)			
	(iii) void funct(); **(iv)** char x;			

(e) How can you determine the length of a string in C?		**1**	**R**	**3**

(i) length(str) **(ii)** sizeof(str)

(iii) strlen(str) **(iv)** str size()

Q.2 Attempt Any Two **[10]**

(a) Discuss advantages and disadvantages of pointer. Also explain pointer to pointer.	**5**	**U**	**3**
(b) Define string? Explain any 5 built-in string functions with example.	**5**	**U**	**3**
(c) What is array? Explain the types of arrays with an example.	**5**	**U**	**3**

Q.3 Attempt Any Two **[10]**

(a) Explain nested structure with an Example.	**5**	**U**	**3**
(b) WAP to input the following details of N students using structure: Roll No: integer Name: string Marks: float Grade: char Print the names of the students with marks >=70.	**5**	**U**	**3**
(c) Explain One Dimensional Array with an Example.	**5**	**U**	**3**

Q.4 Attempt Any Two **[10]**

(a) State the difference between actual arguments and formal arguments.	**5**	**R**	**4**
(b) State the difference between call by value and call by reference.	**5**	**R**	**4**
(c) What is function? Explain User-Defined Functions.	**5**	**R**	**4**

SECTION B

		Marks	BL	CO
Q.5	**Objective-Type Questions**	**[05]**		
(a)	Which computer program accepts the high-level language and converts it into assembly language?	**1**	**R**	**1**
	(i) Interpreter **(ii)** Linker			
	(iii) Assembler **(iv)** Compiler			
(b)	The first expression in a for loop is	**1**	**U**	**2**
	(i) Step value of loop **(ii)** Value of the counter variable			
	(iii) Any of these **(iv)** None of these			
(c)	Which function is used to write data to a file in c?	**1**	**R**	**4**
	(i) putfile() **(ii)** filewrite()			
	(iii)writefile() **(iv)**fwrite()			
(d)	Which is not a loop structure?	**1**	**U**	**2**
	(i) for **(ii)** do while			
	(iii) while **(iv)** if….else			
(e)	Which library is used for file operations such as reading and writing the files?	**1**	**R**	**4**
	(i) stdio.h **(ii)** iostream.h			
	(iii) fileio.h **(iv)** files.h			
Q.6	**Attempt Any Two**	**[10]**		
(a)	Differentiate between Procedure Oriented and Object-Oriented Language.	**5**	**1**	**1**
(b)	Explain flowchart in detail and draw a flowchart to calculate simple interest	**5**	**A**	**1**
(c)	Explain any five mathematical functions in detail	**5**	**A**	**1**
Q.7	**Attempt Any Two**	**[10]**		
(a)	Explain switch.... case statement in detail.	**5**	**A**	**2**
(b)	Explain types of loop in detail with example.	**5**	**U**	**2**
(c)	Explain entry controlled and exit controlled loop with proper syntax.	**5**	**U**	**2**

Q.8 Attempt Any Two **[10]**

(a)	Describe file management. And List the various file management functions.	**5**	**A**	**4**
(b)	Explain fseek() and fprintf() with example Explain pre-processor directives in C.	**5**	**A**	**4**
(c)	Write a program to open the file and read the content of the file and display on console and close it.	**5**	**A**	**4**

****