RGPV (DIPLOMA WING) BHOPAL	OBE CURRICULUM FOR THE COURSE	FORMAT-3	Sheet No. 1/5

Branch	Electronics and Telecommunication Engineering	Semester	III

Course Code	304	Course Name	Programming in C

Course Outcome 1	**Develop simple programs using library functions viz. printf, scanf, getch etc.**	Teach Hrs	Marks
Learning Outcome 1	**Identify a real life problem and convert it into a programming problem using flow-charts, algorithms, pseudo-codes etc. (Cognitive)**	7	10
Contents	Program concept, Assembler, Compiler & Interpreter, Algorithms, Flowcharts		
Method of Assessment	External		
Learning Outcome 2	**Write, compile, edit, execute and debug simple C programs on any Integrated Development Environment (IDE). (Cognitive)**	7	10
Contents	C program structure, pre-processor directives, C tokens, character set, keywords, identifiers, constants, variables, data types, data types conversion, Expressions, Statements, Use of header files		
Method of Assessment	Internal		
Learning Outcome 3	**Write simple input output programs using library functions printf, scanf, getch etc. (Psycho Motor)**	7	10
Contents	Input/output functions- printf(), scanf(), getchar(), putchar(), gets(), puts() etc. Formatted I/O using control string.		
Method of Assessment	External		

RGPV (DIPLOMA WING) BHOPAL	OBE CURRICULUM FOR THE COURSE	FORMAT-3	Sheet No. 2/5

Branch	Electronics and Telecommunication Engineering	Semester	III

Course Code	304	Course Name	Programming in C

Course Outcome 2	**Solve simple logical problems using different operators in programs.**	Teach Hrs	Marks
Learning Outcome 1	**Identify different operators available in C program. (Cognitive)**	7	10
Contents	Arithmetic Operators, Logical Operators, assignment operator, Relational Operators, Bitwise Operators, Special Operators: exit(), sizeof(), increment and decrement (post and pre) operators, precedence & associativity, Type casting.		
Method of Assessment	External		
Learning Outcome 2	**Select and utilize the right operator amongst all the operators in a particular problem scenario. (Cognitive)**	7	10
Contents	Example practice problems using different types of operators.		
Method of Assessment	Internal		
Learning Outcome 3	**Write and execute simple math/logic based programs using different operators. (Psycho Motor)**	7	10
Contents	Program implementation of example practice problems using different types of operators.		
Method of Assessment	External		

RGPV (DIPLOMA WING) BHOPAL	OBE CURRICULUM FOR THE COURSE	FORMAT-3	Sheet No. 3/5

Branch	Electronics and Telecommunication Engineering	Semester	III

Course Code	304	Course Name	Programming in C

Course Outcome 3	**Utilize if-else, switch-case, goto, while, do-while, for loops to control the flow of program.**	Teach Hrs	Marks
Learning Outcome 1	**Identify different control statements (as mentioned in CO) available in C program. (Cognitive)**	7	10
Contents	**Branching statements**: *if* statement, *if- else*, nested *if*, *goto* statement, *switch-case* statement. **Loop statements**: *for* statement, *while* statement, *Do-while* statement, *break* and *continue* statement, nested loop and infinite loop.		
Method of Assessment	External		
Learning Outcome 2	**Select and utilize the right control statement amongst all the options in a particular problem scenario. (Cognitive)**	7	10
Contents	Example practice problems using different types of control statements.		
Method of Assessment	Internal		
Learning Outcome 3	**Write and execute simple math/logic/display based programs using different flow control statements. (Psycho Motor)**	7	10
Contents	Program implementation of example practice problems using different types of control statements.		
Method of Assessment	Internal		

RGPV (DIPLOMA WING) BHOPAL	OBE CURRICULUM FOR THE COURSE	FORMAT-3	Sheet No. 4/5

Branch	Electronics and Telecommunication Engineering	Semester	III

Course Code	304	Course Name	Programming in C

Course Outcome 4	**Develop simple programs using arrays, strings, structures and enums.**	Teach Hrs	Marks
Learning Outcome 1	**Identify different derived data types (as mentioned in CO) available in C program. (Cognitive)**	7	10
Contents	**Arrays**: Concept of one dimensional and Multi-dimensional array, array declaration, Array initialization, operations on one and two-dimensional arrays. **Strings**: String Manipulations, gets(), puts(), string operations, string functions (concatenation, comparison, length of a string etc.) **Structures:** Definition, Declaration, initializing structure, membership operator, accessing structure elements, concept of enum.		
Method of Assessment	Internal		
Learning Outcome 2	**Select and utilize the right derived data type amongst all the options in a particular problem scenario. (Cognitive)**	7	10
Contents	Example practice problems using different types of derived data.		
Method of Assessment	External		
Learning Outcome 3	**Write and execute simple mathematics/logic/display based programs using different derived data types. (Psycho Motor)**	7	10
Contents	Program implementation of example practice problems using different types of derived data.		
Method of Assessment	External		

RGPV (DIPLOMA WING) BHOPAL	OBE CURRICULUM FOR THE COURSE	FORMAT-3	Sheet No. 5/5

Branch	Electronics and Telecommunication Engineering	Semester	III

Course Code	304	Course Name	Programming in C

Course Outcome 5	Develop simple programs using pointers and functions.	Teach Hrs	Marks
Learning Outcome 1	**Identify the need for functions and pointers in C programming.(Cognitive)**	7	10
Contents	**Basics of function:** Built in and user defined functions. Function declaration, Function prototype, Local and global variables, scope and life of variable, call by value, call by reference. Arguments and Parameter passing mechanisms, recursion, command line argument. **Storage classes:** static auto, extern, and register. **Pointers:** Definition, Types, Declaration, & and * operator, pointer expression, pointer arithmetic, pointer to pointer, array of pointer, pointer to function.		
Method of Assessment	External		
Learning Outcome 2	**Write and execute programs using pointers and functions. (Cognitive)**	7	10
Contents	Program implementation of example practice problems of pointers and functions.		
Method of Assessment	External		
Learning Outcome 3	**Understand and utilize the concept of call-by-value, call-by-reference, recursion, storage classes and dynamic memory allocation in C. (Psycho Motor)**	7	10
Contents	Program implementation of example practice problems of above (LO3).		
Method of Assessment	Internal		

SuggestedListofExperiments:

S.N.	Experiment	CO
1.	StudyofanyC editor-filemenu, editmenu, run menu,compilemenuetc.	All
2.	Programs usingInput/Outputstatements:printf(),scanf(),gets(),puts(),getch(),getcha	CO305.1
3.	Programs on formattedI/Ousingcontrolstrings.	CO305.1
4.	Programs usingdifferentdatatypes.	CO305.1
5.	Programs usingArithmeticOperators.	CO305.2
6.	Programs usingLogicalOperators.	CO305.2
7.	Programs usingRelational Operators.	CO305.2
8.	Programs usingAssignmentOperators.	CO305.2
9.	Programs usingBitwiseOperators.	CO305.2
10.	Programs usingexit()operator.	CO305.2
11.	Programs usingsizeof()operator.	CO305.2
12.	Programs usingif-elseStatements.	CO305.3
13.	Programs usingnestedif-elseStatements.	CO305.3
14.	Programs usinggotoStatement.	CO305.3
15.	Programs usingswitch-caseStatement.	CO305.3
16.	Programs usingwhileloopStatement.	CO305.3
17.	Programs usingdo-whileloopStatement.	CO305.3
18.	Programs usingforloop Statement.	CO305.3
19.	Programs usingbreakStatement.	CO305.3
20.	Programs usingcontinueStatement.	CO305.3
21.	Programs usingSingledimensionalarrays.	CO305.4
22.	Programs usingTwo-dimensionalarray.	CO305.4
23.	Programs usingStringFunctions.	CO305.4
24.	Programs usingcommand line argument.	CO305.4
25.	Programs usingStructures.	CO305.4
26.	Programs usingEnums.	CO305.4
27.	Programs usingsimpleFunctions	CO305.5
28.	Programs usingcallbyValue& Callbyreference.	CO305.5
29.	Programs usingrecursion.	CO305.5
30.	Programs usingStatic,Auto,&ExternStorageclasses.	CO305.5
31.	Programs usingPointer.	CO305.5
32.	Programs usingPointerto aFunction.	CO305.5
33.	Programs usingParameterPassingmechanisms(callby value/callbyreference)	CO305.5

Twentyexperimentsinasemesterasperthediscretionofthesubjectteacher.

ReferenceBooks/WebPortals:

S.N.	Title	Author
1	Programmingin ANSIC	E. BalaguruswamiTa
2	Let us C	Y.Kanetker BPBPublications
3	Schaum'sOutline ofTheoryand Problemsof Programming with C	Gottfried,ByronS. Schaum'sseries
4	TheC ProgrammingLanguage	BrianW.Kernighan,DennisRitchiePe arsonEducation
5	spoken-tutorial.org	
6.	nptel.ac.in	
7.	swayam.gov.in	

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	1	1	

COURSE NAME	**Programming in C**
CO Description	Develop simple programs using library functions viz. printf, scanf, getch etc.
LO Description	Identify a real life problem and convert it into a programming problem using flow-charts, algorithms, pseudo-codes etc.

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1.	Program concept, Assembler, Compiler & Interpreter, Algorithms, Flowcharts	Interactive classroom lecture, PPT, Program demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/ tutorial	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1.	End Semester Theory Exam	**Student will be asked to** (and/or) 1. Read and develop flowcharts, algorithms, pseudo codes. 2. Interpret real life problem and document it into these forms.	10	Question paper, Rating scale	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	1	2	

COURSE NAME	**Programming in C**
CO Description	Develop simple programs using library functions viz. printf, scanf, getch etc.
LO Description	Write, compile, edit, execute and debug simple C programs on any Integrated Development Environment (IDE).

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
2	C program structure, pre-processor directives, C tokens, character set, keywords, identifiers, constants, variables, data types, data types conversion, Expressions, Statements, Use of header files	Interactive classroom lecture, PPT, Program demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct quiz/assignments/ tutorial	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
2	Mid Semester Theory Exam	**Student will be asked to** (and/or): 1. Write simple introductory programs in C.	10	Question paper, Rating scale	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	1	3	

COURSE NAME	**Programming in C**
CO Description	Develop simple programs using library functions viz. printf, scanf, getch etc.
LO Description	Write simple input output programs using library functions printf, scanf, getch etc.

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
3.	Input/output functions- printf(), scanf(), getchar(), putchar(), gets(), puts() etc. Formatted I/O using control string.	Interactive classroom lecture, PPT, Lab demonstration, hands on practice, lab assignments.	• Teacher will explain the content in class/lab. • Teacher with support from lab staff will demonstrate the procedure of computer lab experiments. • Student will conduct computer lab assignment based on these experiments.	4	3	Text Books, PPT, Handouts, chalk board, Practical Manual, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
3.	End Semester Practical Exam	**Student will be asked to (and/or):** 1. Write and execute programs based on formatted library I/O functions. (printf, scanf) 2. Write and execute programs based on unformatted library I/O functions. (getch, gets, putch, puts etc.)	10	Rubrics, Rating scale	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	2	4	

COURSE NAME	**Programming in C**
CO Description	Solve simple logical problems using different operators in programs.
LO Description	Identify different operators available in C program.

SCHEME OF STUDY

S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
4.	Arithmetic Operators, Logical Operators, assignment operator, Relational Operators, Bitwise Operators, Special Operators: exit(), sizeof(), increment and decrement (post and pre) operators, precedence & associativity, Type casting.	Interactive classroom lecture, PPT, Lab demonstration, hands on practice, lab assignments.	Teacher will explain the contents and provide handouts to students. Teacher will conduct quiz/assignments/ tutorial	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
4.	End Semester Theory Exam	**Student will be asked to**(and/or): 1. Explain different types of operators in C. 2. Use these operators to solve simple problems.	10	Question paper, Rating scale	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	2	5	

COURSE NAME	**Digital Electronics**
CO Description	Solve simple logical problems using different operators in programs.
LO Description	Select and utilize the right operator amongst all the operators in a particular problem scenario.

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
5	Example practice problems using different types of operators.	Interactive classroom lecture, PPT, demonstration, quiz, assignments, tutorial	• Teacher will explain the content in class/lab. • Teacher with support from lab staff will demonstrate the procedure of computer lab experiments. • Student will conduct computer lab assignment based on these experiments.	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
5	Practical test in laboratory	**Student will be asked to** (and/or) 1. Identify the right operator to use. 2. Use these operators to solve simple problems.	10	Rubrics, Rating scale	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	2	6	

COURSE NAME	**Digital Electronics**
CO Description	Solve simple logical problems using different operators in programs.
LO Description	Write and execute simple math/logic based programs using different operators.

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
6	Program implementation of example practice problems using different types of operators.	Interactive classroom lecture, PPT, demonstration, quiz, assignments.	Teacher will explain the contents and provide handouts to students. Teacher will conduct quiz/ assignments/ tutorial	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
6	End Semester Theory Exam	Student will be asked to 1. Identify the right operator to use. 2. Use these operators to solve simple problems.	10	Question paper, Rating scale	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	3	7	

COURSE NAME	**Digital Electronics**
CO Description	Utilize if-else, switch-case, goto, while, do-while, for loops to control the flow of program.
LO Description	Identify different control statements available in C program.

SCHEME OF STUDY

S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
7	**Branching statements**: *if* statement, *if- else,* nested *if, goto* statement, *switch-case* statement. **Loop statements**: *for* statement, *while* statement, *Do-while* statement, *break* and *continue* statement, nested loop and infinite loop.	Interactive classroom lecture, PPT, Lab demonstration, hands on practice, lab assignments.	• Teacher will explain the content in class/lab. • Teacher with support from lab staff will demonstrate the procedure of lab experiments. • Student will conduct lab assignment based on these experiments.	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
7	End Semester Theory Exam	Student will be asked to(and/or): 1. Identify different control statements in C. 2. Use these statements to solve simple problems.	10	Question Paper, Rating scale	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	3	8	

COURSE NAME	**Digital Electronics**
CO Description	Utilize if-else, switch-case, goto, while, do-while, for loops to control the flow of program.
LO Description	Select and utilize the right control statement amongst all the options in a particular problem scenario.

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
8	Example practice problems using different types of control statements.	Interactive classroom lecture, PPT, Lab demonstration, hands on practice, lab assignments.	• Teacher will explain the content in class/lab. • Teacher with support from lab staff will demonstrate the procedure of lab experiments. • Student will conduct lab assignment based on these experiments.	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
8	Practical test in laboratory	Student will be asked to(and/or): 1. Identify the right control statement to use. 2. Use these statements to solve simple problems.	10	Rubrics, Rating scale	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	3	9	

COURSE NAME	**Digital Electronics**
CO Description	Utilize if-else, switch-case, goto, while, do-while, for loops to control the flow of program.
LO Description	Write and execute simple math/logic/display based programs using different flow control statements.

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
9	Program implementation of example practice problems using different types of control statements.	Interactive classroom lecture, PPT, demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct quiz/assignments/ tutorial	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
9	Practical test in laboratory	Student will be asked to(and/or): 1. Identify the right control statement to use. 2. Use these statements to solve simpleproblems.	10	Rubrics/Rating scale	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	4	10	

COURSE NAME	**Digital Electronics**
CO Description	Develop simple programs using arrays, strings, structures and enums.
LO Description	Identify different derived data types (as mentioned in CO) available in C program.

SCHEME OF STUDY

S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
10	**Arrays**: Concept of one dimensional and Multi-dimensional array, array declaration, Array initialization, operations on one and two-dimensional arrays. **Strings**: String Manipulations, gets(), puts(), string operations, string functions (concatenation, comparison, length of a string etc.) **Structures**: Definition, Declaration, initializing structure, membership operator, accessing structure elements, concept of enum.	Interactive classroom lecture, PPT, Lab demonstration, hands on practice, lab assignments.	• Teacher will explain the content in class/lab. • Teacher with support from lab staff will demonstrate the procedure of lab experiments. • Student will conduct lab assignment based on these experiments.	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
10	Mid Semester Theory Exam	Student will be asked to(and/or): 1. Identify different derived data types in C. 2. Use them to solve simpleproblems.	10	Question paper, Rating scale	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	4	11	

COURSE NAME	**Digital Electronics**
CO Description	Develop simple programs using arrays, strings, structures and enums.
LO Description	Select and utilize the right derived data type amongst all the options in a particular problem scenario.

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
11	Example practice problems using different types of derived data.	Interactive classroom lecture, PPT, demonstration, quiz, assignments.	Teacher will explain the contents and provide handouts to students. Teacher will conduct quiz/ assignments/ tutorial	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
11	End Semester Practical Exam	Student will be asked to(and/or): 1. Identify the right derived data type to use. 2. Use them to solve simple problems.	10	Rubrics/Rating scale	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	4	12	

COURSE NAME	**Digital Electronics**
CO Description	Develop simple programs using arrays, strings, structures and enums.
LO Description	Write and execute simple mathematics/logic/display based programs using different derived data types.

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
12	Program implementation of example practice problems using different types of derived data.	Interactive classroom lecture, PPT, demonstration, quiz, assignments.	Teacher will explain the contents and provide handouts to students. Teacher will conduct quiz/ assignments/ tutorial	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
12	End Semester Theory Exam	Student will be asked to(and/or): 1. Identify the right derived data type to use. 2. Use them to solve simple problems.	10	Question paper, Rating scale	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	5	13	

COURSE NAME	**Digital Electronics**
CO Description	Develop simple programs using pointers and functions.
LO Description	Identify the need for functions and pointers in C programming.

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
13	**Basics of function:** Built in and user defined functions. Function declaration, Function prototype, Local and global variables, scope and life of variable, call by value, call by reference. Arguments and Parameter passing mechanisms, recursion, command line argument. **Storage classes:** static auto, extern, and register. **Pointers:** Definition, Types, Declaration, & and * operator, pointer expression, pointer arithmetic, pointer to pointer, array of pointer, pointer to function.	Interactive classroom lecture, PPT, demonstration, quiz, assignments.	Teacher will explain the contents and provide handouts to students. Teacher will conduct quiz/ assignments/ tutorial	6	--	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
13	End Semester Theory Exam	Student will be asked to(and/or): 1. Identify the need for functions, storage classes and pointers. 2. Use them to solve simpleproblems.	10	Question paper, Rating scale	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. 4
		E	0	3	3	0	4	5	14	

COURSE NAME	**Digital Electronics**
CO Description	Develop simple programs using pointers and functions.
LO Description	Write and execute programs using pointers and functions.

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
14	Program implementation of example practice problems of pointers and functions.	Interactive classroom lecture, PPT, demonstration, quiz, assignments.	Teacher will explain the contents and provide handouts to students. Teacher will conduct quiz/ assignments/ tutorial	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
14	End Semester Theory Exam	Student will be asked to(and/or): Solve simple problems using functions and pointers.	10	Question paper, Rating scale	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code			Course Code			CO Code	LO Code	Format No. **4**
		E	0	3	3	0	4	5	15	

COURSE NAME	**Digital Electronics**
CO Description	Compare various digital logic family.
LO Description	Make use of PAL & PLA for implementation of Boolean expression and design simple logic circuit.

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
15	Understand and utilize the concept of call-by-value, call-by-reference, recursion, storage classes and dynamic memory allocation in C.	Interactive classroom lecture, PPT, Video, demonstration, quiz, assignments.	Teacher will explain the contents and provide handouts to students. Teacher will conduct quiz/ assignments/ tutorial	4	3	Text Books, PPT, Handouts, chalk board, Computers, IDE software	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
15	Seminar presentation	Student will be asked to(and/or): Solve simple problems using functions and pointers.	10	Rubrics, Rating scale	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)