

POKHARA UNIVERSITY

Level: Bachelor

Semester – Spring

Year : 2007

Programme: BE

Full Marks: 100

Course: Programming in C

Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) Explain different generations of computer. Briefly distinguish high level language from low level language. 8
- b) What is an operator? List different types of operators used in C programming language. Explain any four of them. 1+1
+5
2. a) What will be the output after execution of the following code? 4+2
Implement the following program in while and do-while loop. +2

```
void main ( )  
{  
for (int i = 0 ; i <= 20 ; i ++)  
printf ( “ % d “ , i ++ ) ;  
}
```

- b) Describe the output generated by each of the following program. 7

```
#include < stdio.h >
```

```
main ( )
```

```
{ int i;
```

```
clrscr ( );
```

```
for ( i = 1; i <= 4; i ++)
```

```
funcl ( i );
```

```
getch ( );
```

```
}
```

```
void funcl (int n)
```

```
{ int num = 3;
```

```
printf ( “%d\n\n”, n*num);
```

```
}
```

- | | | | |
|----|------|--|-----|
| 3. | a) | What is the difference between function prototype and function definition and function call | 5 |
| | b) | Write a program and flow chart to read a positive integer value and compute the following sequence. If the number is even, half it, if it is odd, multiply by 3 and add 1 and print result. If the input value is less than 1, print a message containing the word "ERROR". | 10 |
| 4. | a) | Array is known as a disguised form of pointer. Justify the statement with a suitable example. | 7 |
| | b) | Write a menu driven program for the following using functions | 8 |
| | i) | display Fibonacci series upto 50 terms | |
| | ii) | display ASCII code of characters. | |
| | iii) | exit | |
| 5. | a) | How dynamic memory allocation can be achieved? Explain with a suitable example. What are the advantages of dynamic memory allocation? | 8 |
| | b) | What is a string? Write a program to read a string and print converting lower to upper and upper to lower case characters. | 7 |
| 6. | a) | Briefly explain the use of structure and union in different aspects. Create a structure "Student" with data members name, roll, and marks of three subjects for 100 students.

Write a program to display the names of those students with average mark greater than 80. | 8 |
| | b) | What is the significance of FILE pointer? How it is declared? Explain different types of file opening modes available in C with suitable examples. | 7 |
| 7. | | Write short notes on (Any Two): | 2×5 |
| | a) | Looping and recursion | |
| | b) | Application macros | |
| | c) | Operator precedence and associativity | |
| | d) | Local and global variables | |