

Ex/2-Comp-Sc/Common/73/2018

BACHELOR OF SCIENCE EXAMINATION, 2018 (COMMON)

(2nd Year, 2nd Semester)

**COMPUTER PROGRAMMING
AND APPLICATION**

Full Marks : 50

Time : Two Hours

The figures in the margin indicate full marks.

Answer any *five* questions.

1. (a) Distinguish between pre-increment and post-increment operators with the help of a suitable example. 3
- (b) Write a C program to print the following pattern for n rows using loops as well as function. 7

```
1
2 2
3 3 3
4 4 4 4
```

2. (a) Identify the difference(s) between switch-case and if-else with the help of a suitable example. 4

[Turn over]

[2]

- (b) Write a C program to read an array of N integers and find the maximum and minimum among them. 6
3. (a) What are the differences between for and while loops in C ? 3
- (b) Write a C program to print all the prime numbers within a given range specified by the user. 7
4. (a) What are the differences between pointer arithmetic with normal arithmetic ? 4
- (b) Write a C program to find factorial of a number recursively. 6
5. (a) What do you mean by macro in C language ? Explain with an example. 3
- (b) Write a C program to find out the transpose of a matrix of size $M \times N$. 7
6. (a) What are the differences between structure and array in C ? 3
- (b) Write a C program to add two complex numbers by passing structure to a function. 7

[Turn over]

[3]

7. (a) What are differences among various file opening modes
such as “r”, “w” and “a” ? 3
- (b) Write a C program to copy the content of a file to
another file. 7
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