

New

2017

BCA 1st Semester Examination

PROGRAMMING IN 'C'

PAPER—1102

Full Marks : 70

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Answer Q. No. 1 and any four from the rest.

1. Attempt any *five* questions : 5×2
- (a) What are the roles of preprocessor in a C programming ?
 - (b) Write a C program to interchange 2 variables without using the third variable.
 - (c) What is an argument ? Explain different types of argument.

(Turn Over)

- (d) What is enumeration ? Explain with proper example.
 - (e) Are the expressions `*ptr++` and `++*ptr` same ?
 - (f) Define what is header file ?
 - (g) What is dynamic memory allocation ?
2. (a) Define what is datatype ? What are primitive datatype in C language ?
- (b) What is the purpose of main function ?
 - (c) What is use of if else Statement ? Explain flowchart.
 - (d)

```
int i = 0 ;  
while (i++ <0)  
i - - ;
```

Explain the output for above piece of code.
 - (e) What is the use of return Statement ?
 - (f) How command line arguments are passed through a C program. (2+1)+2+3+2+2+3

3. (a) What's the difference between constant and variables in C programming ?
- (b) What is ternary operator in C language ? Explain with an example.
- (c) Differentiate between local variable and global variable.
- (d) Explain continue and break statements with an example.
- (e) Distinguish between structure and union in C language.
- (f) What is array ? Why is it necessary to give the size of an array in an array declaration ? $2+3+2+3+2+3$

4. What will be the output ?

```
(i) main ()
{
    int c [] = {2, 8, 3, 4, 4, 6, 7, 5};
    int j, *p = c, *q = c;
    for (j = 0 ; j < 5 ; j++)
    {
        printf ("%d", *c);
        ++q;
    }
}
```

```
for (j = 0 ; j < 5 ; j++)  
{  
    printf ("%d", *p) ;  
    ++p ;  
}  
}
```

(ii) #define SQR(x) (x * x)

```
int main ( )  
{  
    int a, b = 3 ;  
    a = SQR (b + 2) ;  
    printf ("%d \n", a) ;  
    return 0 ;  
}
```

(iii) void main ()

```
{  
    printf("\n %d %d %d", size of ('3'),  
        size of ("3")  
        size of (3)) ;  
}
```

5×3

5. (a) What do you mean by type casting ?
- (b) What is the difference between an object file and executable file in C programming ?
- (c) What is pointer ?
- (d) Explain call by value and call by reference with suitable example.
- (e) Explain the following string functions :
Strcat, Strcmp, strlen.

2+3+2+5+3

6. (a) Differentiate pointer to an array and array of pointers.
- (b) Display the largest element of an array.
- (c) How to declare a pointer to a pointer (double pointer) in C language ?
- (d) Write any programme using dynamic memory allocation and release memory.

3+6+2+4

7. (a) What is file ?
- (b) What are the basic file operations in C language explain briefly.
- (c) Explain the following functions :
fputc, fgets, fputs, fseek
- (d) Write a program in C to copy the contents of one file to another file.
- (e) What is file pointer ? 1+2+4+6+2
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