

Enrollment No.....



Faculty of Engineering
End Sem (Even) Examination May-2018
EN3ES06 Computer Programming

Programme: B.Tech.

Branch/Specialisation: All

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. Executable program is loaded into main memory by. 1
(a) Compiler (b) Interpreter (c) Linker (d) Loader
- ii. An algorithm is finite set of 1
(a) Program (b) Elements (c) Instructions (d) Values
- iii. How many times following loop is executed? 1
for(i=0; ;i++) { }
(a) 1 time (b) Infinite
(c) 10 times (d) Error in loop syntax
- iv. Find the output of following program 1
void main()
{
if(15)
printf("Hello Medi-Caps");
else
printf("Hi Medi-Caps");
}
(a) Hello Medi-Caps (b) Hi Medi-Caps
(c) Error (d) None of these
- v. Binary search is applied when? 1
(a) List is sorted (b) List is unsorted
(c) Random Number (d) All of these
- vi. Correct array declaration is 1
(a) a[3] (b) int a (c) int [3] (d) int a[3]

P.T.O.

[2]

[3]

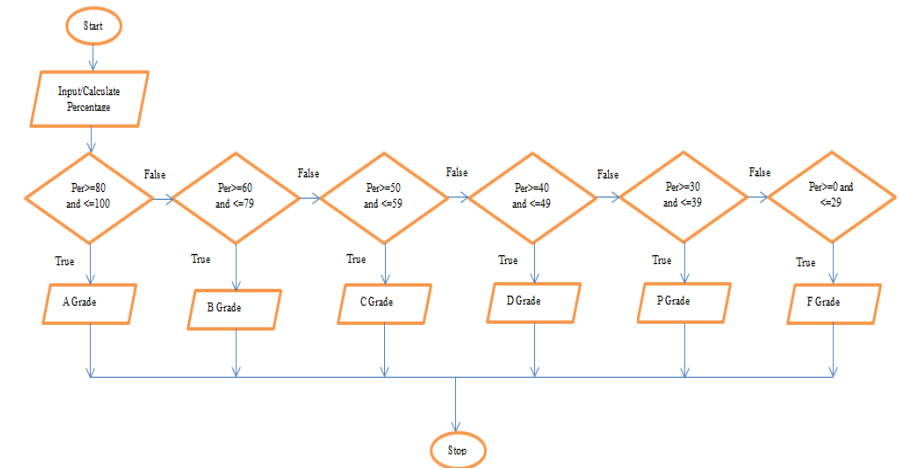
- vii. Structure is also known as? **1**
(a) Homogenous data structure (b) Heterogeneous data structure
(c) Array (d) Variable
- viii. Syntax of double pointer declaration? **1**
(a) datatype *pointername (b) datatype pointername
(c) datatype **pointername (d) All of these
- viii. When file was not open then fopen() function return a **1**
(a) Address (b) NULL (c) Value (d) Error
- ix. Function used to read a line from file? **1**
(a) gets() (b) puts (c) fgetc() (d) fgets()
- Q.2 i. Explain software development life cycle in short? **2**
ii. Write difference between compiler and interpreter? **3**
iii. Draw a flow chart for the grading the students in an University. **5**
The grading is done according to the following rules:
- | Average marks | Grade |
|---------------|-------|
| 80-100 | A |
| 60-79 | B |
| 50-59 | C |
| 40-49 | D |
| 30-39 | P |
| 0-29 | F |
- OR iv. Design an algorithm which checks the given number is prime number or not prime number. **5**
- Q.3 i. Write rules for declaring an identifier. **2**
ii. Explain data types available in C. **3**
iii. Write a program to print English alphabet with ASCII value in C. **5**
- OR iv. Explain all conditional statements in C language? **5**
- Q.4 i. Explain recursion with example? **2**
ii. Write difference between call by value and pass by value function parameter passing **3**
iii. Write a program to search an element from list? **5**
- OR iv. Explain any five string functions with calling statement. **5**

- Q.5 i. Explain structure with example? **2**
ii. Write difference between structure and union. **3**
iii. Why pointer is used in C programming language? Write a program for structure and pointer. **5**
- OR iv. What is dynamic memory allocation? Explain all functions used in C to allocate dynamic memory. **5**
- Q.6 i. What is the significance of EOF? **2**
ii. Explain file opening modes in C? **3**
iii. Write a program to copy the content of one file into another file **5**
- OR iv. Explain file handling functions used in C language. **5**

Marking Scheme EN3ES06 Computer Programming

- Q.1 i. Executable program is loaded into main memory by. 1
(d) Loader
- ii. An algorithm is finite set of 1
(c) Instructions
- iii. How many times following loop is executed? 1
for(i=0; ;i++) {
(b) Infinite
- iv. Find the output of following program 1
void main()
{
 if(15)
 printf("Hello Medi-Caps");
 else
 printf("Hi Medi-Caps");
}
- (a) Hello Medi-Caps
- v. Binary search is applied when? 1
(a) List is sorted
- vi. Correct array declaration is 1
(d) int a[3]
- vii. Structure is also known as? 1
(b) Heterogeneous data structure
- viii. Syntax of double pointer declaration? 1
(c) datatype **pointername
- ix. When file was not open then fopen() function return a 1
(b) NULL
- x. Function used to read a line from file? 1
(d) fgets()
- Q.2 i. Software development life cycle 2
Analysis, design, coding and testing 0.5 for each (0.5 mark *4)
- ii. Difference between compiler and interpreter 3
At least three difference 1 mark for each (1 mark * 3)

- iii. Draw a flow chart (0.5 mark * 10) 5
0.5 mark for one condition (correct Symbol)



- OR iv. Design an algorithm 5
For steps 2 marks
For correct logic. 3 marks
Algorithm
Input Any integer number
Output Is it a prime number or Not
Prime(num)
1 Declare variables num, i, flag=0.
2 Set i=2
3 while i<=num/2
4 if num mod i = 0
5 print "Not a Prime number" and exit;
6 flag=1
7 i=i+1
8 if (flag==0)
9 Print "Prime number"
10 stop
- Q.3 i. Rules for declaring an identifier. 2
0.5 mark for each rule
- ii. Data types available in C. 3
For pre define (int,char,float etc) 1.5 mark
For user define (string, array, structure etc) 1.5 mark

- iii. Write a program to print English alphabet with ASCII value in C. **5**
- ```
#include<stdio.h>
void main()
{
 int/char a;
 for(a=65/97/'a'/'A';a<=90/122/'z'/'Z';a++)
 {
 printf("%c ",a)
 }
}
```
- OR iv. Explain all conditional statements in C language? **5**  
if, if-else, switch case 1.5 mark for each (1.5 marks \* 3)  
0.5 mark for example
- Q.4 i. Definition recursion 1 mark **2**  
Example 1 mark
- ii. Difference between call by value and pass by value function **3**  
parameter passing At least three difference 1 mark for each
- iii. Write a program to search an element from list? **5**  
Declaration 1 mark  
Input 1 mark  
Looping and condition logic 2 marks  
Output 1 mark
- OR iv. Any five string functions with calling statement. (1 mark \* 5) **5**  
1 mark for definition and calling statement of each function
- Q.5 i. Definition structure 1 mark **2**  
Example 1 mark
- ii. Difference between structure and union. **3**  
At least three difference ( 1 mark for each) (1 mark \* 3)
- iii. Pointer is used in C programming language **5**  
Reason 1 mark  
Pointer declaration 1 mark  
Structure declaration 1 mark  
program for structure and pointer 2 marks
- OR iv. Definition dynamic memory allocation 1 mark **5**  
All functions used in C to allocate dynamic memory 4 marks  
1 mark for each function

- Q.6 i. Significance of EOF with example **2**  
It simply indicates that the end of file has been reached then the reading should be terminated. 1 mark  
Syntax: fgetc(fp) != EOF 1 mark
- ii. Explain file opening modes in C (1 mark \* 3) **3**  
At least three modes (1 mark for each)
- iii. Program to copy the content of one file into another file **5**  
File pointer declaration and opening file 1 mark  
read data from file 1 mark  
write data into file 1 mark  
copy all content into file 2 marks
- OR iv. File handling functions used in C language. (1 mark \*5) **5**  
At least 5 functions with definition and syntax (1 mark for each)

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