

**M. SC. BIOINFORMATICS SEM.-II (C.B.C.S.) (2013 COURSE) /
ADVANCED DIPLOMA IN BIOINFORMATICS SEM.-II
(C.B.C.S.) (2013 COURSE) : SUMMER - 2018
SUBJECT: PERL & BIOPERL PROGRAMMING**

Day: **Monday**
Date: **16/04/2018**

S-2018-1130

Time: **02.00 PM TO 05.00 PM**
Max. Marks: 60

N.B.:

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of the remaining attempt **TWO** questions from each section.
- 2) Answers to two section should be written in **SEPARATE** answer books.
- 3) Figures to the **RIGHT** indicate full marks.
- 4) Draw neat labelled diagrams **WHEREVER** necessary.

SECTION-I

Q.1 Answer any **FIVE** of the following: **(10)**

- a) What are range operators? How will you get size of an array?
- b) What does '\$_' and '\$' mean?
- c) What the difference between (\$x++) and (++\$x)?
- d) Name two reasons why subroutines are useful.
- e) What happens when you declare a 'my' variable with the same name as global variable?
- f) **BUG BUSTER;**
what wrong with this program;
Print "Enter the word foo"
 Chomp (\$input = < STDIN >);
 if (\$input = 'foo') {
 print "thank you"; }
Else { print "that's not the word foo \n" : }

Q.2 Write a program that accepts any number of lines of any kind of input, ending with a reference Enter. Return the number of line that were entered. **(10)**

OR

```
BUG BUSTER;  
while ( ) {  
    print " enter a name";  
    chomp ( $input = < STDIN > );  
    if ($input ne "") { $names ++  
    }  
    Else { last ; }  
}
```

Q.3 What are datatypes of PERL? **(10)**

OR

Write a script that prompts you for a character and then returns the number of times the character occurs in string. Use index function.

- Q.4** When you assign to list, the elements are copied over from right to left; (10)
(\$a, \$b) = (10, 20)
\$a becomes 10 and \$b becomes 20. Investigate what happens;
- i) there are more element on right than on left .
 - ii) there are more elements on left than on right.
 - iii) there is a list on left but a single scalar on right.
 - iv) three is a single scalar on left but a list on right.

OR

Write a subroutine that takes a string as an argument and returns the string in reverse order by words.

SECTION-II

- Q.5** Answer any **FIVE** of the following: (10)

- a) How do you sort a hash?
- b) What does the following function do?
 - i) Split
 - ii) Chop
- c) What are subroutines?
- d) How will you print all the values of a hash?
- e) What are quantifiers?
- f) BUG BUSTER;
print 'Search for what?' ;
chomp (\$pat = < STDIN>) ;
while (<>) { while (/\$pat /) {
\$ count ++; }}}

- Q.6** What is a POD file? Why are POD in your PERL scripts over some other (10)
format like HTML?

OR

What does the following hash function do?

- i) Reverse
- ii) Sort
- iii) Merge

- Q.7** How will you print the sequence of a FASTA file in a single line? (10)

OR

Write short note on POD.

- Q.8** What do each of the following patterns do? (10)

- i) / ice\s*cream/
- ii) ^d\d\d/
- iii) / xy|yz+ /
- iv) / [\d\s] {2, 3} /

OR

Explain DBI module.

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