



V SEMESTER B.TECH. (INFORMATION TECHNOLOGY)

END SEMESTER EXAMINATIONS, NOVEMBER 2017

SUBJECT: INTERNET TOOLS AND TECHNOLOGY [ICT 3103]

REVISED CREDIT SYSTEM  
(20/11/2017)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer ALL the questions.
- ❖ Missing data, if any, may be suitably assumed.

- 1A. Develop an application, where a database is populated with the following details: product name, product ID, price, rating, customer username and customer password. Customer logs in using valid username and password from his/her web browser. On successful login a greeting message with his/her username (eg: Hello Ramesh123 !!!) and also details of highest rated and lowest rated product details are displayed. (Use CGI concept and python script) 5
- 1B. With an example, explain client server communication. 3
- 1C. Mention the jQuery method to do the following with a suitable example. 2
- a) To delete an html element from an html document.
  - b) To insert content at the beginning of the selected element.
- 2A. Explain with an example the following html/CSS concepts. 5
- a) z-index
  - b) Colspan & Rowspan
  - c) Internal Linking
  - d) Relative positioning.
- 2B. Write a MathML for the following mathematical equation: 3
- $$w = \frac{-n \pm \sqrt{4b - a^2} + r^{1/4}}{2a}$$
- 2C. Explain the significance of Simple Object Access Protocol. 2
- 3A. Write a dynamic html page which prompts user to enter a choice and performs the following operations based on the user's choice: 5
- a) Display the multiplication table of the number from 1 to n.
  - b) Display fibonacci series upto n terms.(use recursive function)



3B. What is the output of the following error free perl code?  
\$search = "Is it IT is the booking day, The smiling Now it is ing the time to the  
rock 244 5 6 7";  
@out1=( \$search =~ /\b(\w+)\s(\w+)\s(\d)\b/gi );  
if ( \$search =~ /(\w+)\s(\w+)\s(\d)/gi ) {  
print( "Output1: @out1\n" );  
}  
@out2 = ( \$search =~ /\b (\w+) \s( t \w+ )\s(t \w+)(\D) \b /gx );  
print("Output2:@out2\n");

3

3C. Write a python program to do the following:  
a) Convert a string to JSON object.  
b) Convert JSON object to a string.

2

4A. Write a valid markup that validates the following DTD.

```
<!DOCTYPE TVSCHEDULE [  
<!ELEMENT TVSCHEDULE (CHANNEL+)>  
<!ELEMENT CHANNEL (BANNER, DAY+)>  
<!ELEMENT BANNER (#PCDATA)>  
<!ELEMENT DAY ((DATE, HOLIDAY) | (DATE, PROGRAMSLOT+))+>  
<!ELEMENT HOLIDAY (#PCDATA)>  
<!ELEMENT DATE (#PCDATA)>  
<!ELEMENT PROGRAMSLOT (TIME, TITLE, DESCRIPTION?)>  
<!ELEMENT TIME (#PCDATA)>  
<!ELEMENT TITLE (#PCDATA)>  
<!ELEMENT DESCRIPTION (#PCDATA)>  
<!-- ATTLIST TVSCHEDULE NAME CDATA #REQUIRED -->  
<!-- ATTLIST CHANNEL CHAN CDATA #REQUIRED -->  
<!-- ATTLIST PROGRAMSLOT VTR CDATA #IMPLIED -->  
<!-- ATTLIST TITLE RATING CDATA #IMPLIED -->  
<!-- ATTLIST TITLE LANGUAGE CDATA #IMPLIED -->]
```

5

4B. Write a perl program that emulates a bank mechanism for checking a PIN .Keep  
taking input from the keyboard until it is identical to a password number (hard coded  
by you in the program). Restrict the number of attempts to 3 and output a suitable  
message for success and failure and also include number of attempts in the message.

3

4C. Write the XPath expression for the given xml to select the following elements.  
a) Selects the title of the second book  
b) Selects all the year nodes with year less than 2010

**book.xml**  
<?xml version="1.0" encoding="UTF-8"?>  
<bookstore>  
<book category="COOKING">  
<title lang="en">Everyday Italian</title>  
<author>Giada De Laurentiis</author>  
<year>2005</year>  
<price>30.00</price>

2

```
</book>  
<book category="CHILDREN">  
<title lang="en">Harry Potter</title>  
<author>J K. Rowling</author>  
<year>2005</year>  
<price>29.99</price>  
</book>  
</bookstore>.
```

5A. Explain the following with suitable examples with respect to javascript:  
a) Event bubbling.  
b) Dynamic positioning.

5

5B. Write a python program to do the following:  
a) Open an already existing file named file1.txt.  
b) Read the contents of file1.txt line by line and write to another file named  
file2.txt.  
c) Append the text "Welcome to MIT" to the contents of file2.txt.

3

5C. What is the output of the following error free python code?  
squares = {1: 1, 3: 9, 5: 25, 7: 49, 9: 81}  
print(len(squares))  
squares.clear();  
print(len(squares))  
print(squares)

2