

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -3 EXAMINATION- DEC 2017
B.Tech (IT) Vth Semester

COURSE CODE: 10B22CI521

MAX. MARKS: 35

COURSE NAME: Web Applications Engineering

MAX. TIME: 120 Minutes

COURSE CREDITS: 04

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Ques 1. [1 + 5 = 6 Marks] List the major difference between JAVA and JavaScript? A parking garage charges a \$2.00 minimum fee to park for up to three hours. The garage charges an additional \$0.50 per hour for each hour or part thereof in excess of three hours. The maximum charge for any given 24-hour period is \$10.00. Assume that no car parks for longer than 24 hours at a time. Write a script that calculates and displays the parking charges for each customer who parked a car in this garage yesterday. You should input from the user the hours parked for each customer. The program should display the charge for the current customer and should calculate and display the running total of yesterday's receipts. The program should use the function calculateCharges to determine the charge for each customer. Use a text input field to obtain the input from the user.

Ques 2 [1 + 5 = 6 Marks] List three reasons why compression is important on web. Consider an image strip of size 50×100. The image consists of five vertical strips. The grey levels of the strips from left to right are 128, 64, 32, 16 and 8. The corresponding widths of the strips are 35, 30, 20, 10 and 5 pixels respectively. If this stripe image is coded by binary and non-binary Huffman coding, determine its efficiency and degree of compression by both compression techniques. Assuming 2 bits to represent the pixel value.

Ques 3 [1 + 5 = 6 Marks] List the difference between XML DTD and schema in brief? Write a XML schema that is valid according to this DTD.

```
<?xml version="1.0" encoding="UTF-8"?>
<collection>
  <description>
    Some recipes used for the XML tutorial.
  </description>
  <recipe>
    <title>Beef Parmesan with Garlic Angel Hair Pasta</title>
    <ingredient name="beef cube steak" amount="1.5" unit="pound"/>
    ...
    <preparation>
      <step>
        Preheat oven to 350 degrees F (175 degrees C).
      </step>
      ...
    </preparation>
    <comment>
      Make the meat ahead of time, and refrigerate overnight, the acid in the
      tomato sauce will tenderize the meat even more. If you do this, save the
      mozzarella till the last minute.
    </comment>
    <nutrition calories="1167" fat="23" carbohydrates="45" protein="32"/>
  </recipe>
  ...
</collection>
```

Ques 4 [2 + 5 = 7 Marks] How PHP works along with their merit and limitations in brief? Create a form to capture product master and PHP code which will retrieve the data captured by the HTML form display the name of the form and message "Product data entered successful". The HTML form should perform the following: 1) Capture the data such as the product name, description, quantity, price, and product image, 2) Clears the form fields when cancel button is clicked, 3) Submit the captured data upload the file when submit button is clicked, 4) Product Name and Description form field is not left blank, 5) Product Quantity field is not left blank and only number. Alert the user if product quantity is not a numeric value, 6) Product Price field is not left blank and only number. Alert the user if product price is not a numeric value, and Product Image uploads an image of the product.

Ques 5 [2.5 × 4 = 10 Marks] Write short notes on the following with suitable examples:

- (a) XSLT
- (b) PHP Superglobals variables
- (c) XSD Indicators
- (d) PHP database connectivity