SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

BE - SEMESTER–VI • MID SEMESTER-I EXAMINATION – SUMMER 2016

SUBJECT: Software Engineering (2160701) (CE/IT)

DATE: 22-02-2016            TIME:2:00 pm to 03:15 pm            TOTAL MARKS:30

Instructions: 1. All the questions are compulsory.
               2. Figures to the right indicate full marks.
               3. Assume suitable data if required.

Q.1 (a) What is Software? Explain It’s Characteristics. [03]
       (b) Difference between function oriented and object oriented approaches to software design. [03]
       (c) List out any Four Software Design Principles. [02]

Q.2 (a) Explain RAD model. [05]
       (b) Difference Between Incremental Model and Spiral Model. [04]
       (c) What do you mean by Agile? Explain any one Agile Model. [02]

OR

Q.2 (a) Explain Prototype model. [05]
       (b) Explain SDLC in brief. [04]
       (c) Explain any five Agile Principles. [02]

Q.3 (a) Define module coupling and cohesion. Explain different types of coupling and cohesion. [06]
       (b) Draw DFD for Library Management System. [05]

OR

Q.3 (a) Explain White Box testing and Black Box testing with it’s advantages and disadvantages. [06]
       (b) Draw DFD for Hospital Management System. [05]
Q.1 (a) Explain the following terms:
5. Dominant frequency    6. Saturation
(b) Derive and explain DDA line drawing algorithm. Also explain the pros & cons of DDA.

Q.2 (a) Explain scan line polygon filling algorithm with example.
(b) Explain RGB color model. Explain difference between RGB and CMY color model.

OR

Q.2 (a) Explain the working of Cathode Ray tube with diagram.
(b) Derive all formulas for mid-point circle drawing algorithm.

Q.3 (a) Explain the principle of Bresenham’s line drawing algorithm.
Digitize a line having endpoints as (0, 0) & (6, 4) using Bresenham’s line drawing algorithm.
(b) Write a short note on diffuse reflection and specular reflection.

OR

Q.3 (a) Explain followings:
1. DVST    2. Shadow Mask Technique
(b) Explain boundary fill method for polygon filling.
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SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

BE - SEMESTER–VI • MID SEMESTER-I EXAMINATION – SUMMER 2016

SUBJECT: ADVANCED JAVA (2160707) (CE/IT)

DATE: 23-02-2016 TIME: 02:00 pm to 03:15 pm TOTAL MARKS:30

Instructions: 1. All the questions are compulsory.
               2. Figures to the right indicate full marks.
               3. Assume suitable data if required.

Q.1 (a) Enlist the methods of URL class. [01]

   (b) Write a web application using servlet to compute an area of a circle. Get the radius from the client.[with web.xml file] [05]

   (c) Describe Type-4 JDBC driver in details. [05]

Q.2 (a) What is Socket and ServerSocket class with example. [05]

   (b) What is JDBC? List the various types of JDBC Driver. Write merits and demerits. [05]

   (c) Enlist types of session tracking techniques. [01]

OR

Q.2 (a) What is datagram socket? Explain it with example. [05]

   (b) Write code to insert three records into student table using PreparedStatement (assume student table with Name, RollNo, and Branch field). [05]

   (c) Difference between ServletContext and ServletConfig. [01]

Q.3 (a) Discuss Servlet life cycle methods in brief with Counter incremental example. [07]

   (b) Write Short note on PreparedStatement with suitable example. [04]

OR

Q.3 (a) Develop any Servlet application which demonstrates use of session management.[using HttpSession] [07]

   (b) Write Short note on Callable statement with suitable example. [04]
Q.1 (a) Explain HTTP request and HTTP response in detail. [03]
(b) Explain the following tags with example. [03]
1) <ul> 2) <optgroup> 3) <a>
(c) Explain browser compatibility issue and its possible solution. [02]

Q.2 (a) Design a simple registration form which contains input elements like Textbox, Password, RadioButton, Checkbox & Button. [05]
(b) Justify it:” HTTP is called as stateless protocol”. [03]
(c) Explain frames and frame sets. [03]

OR

Q.2 (a) Enlist and explain the website design principles. [05]
(b) Design below Table. [05]

<table>
<thead>
<tr>
<th>Sr No.</th>
<th>Student Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Subject</td>
</tr>
<tr>
<td>1</td>
<td>CG</td>
</tr>
<tr>
<td>2</td>
<td>Dot Net</td>
</tr>
</tbody>
</table>
(c) What is use of <fieldset>? [01]

Q.3 (a) Write PHP and HTML code to upload file. [06]
(b) Explain OOP concept with PHP. [05]

OR

Q.3 (a) What is cookie and session in PHP? How to create and destroy it? [06]
   Explain PHP arrays.
(b) How to read and write file in PHP? Explain with example. [05]
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BE - SEMESTER–VI • MID SEMESTER-I EXAMINATION – SUMMER 2016

SUBJECT: .NET TECHNOLOGY (2160711) (CE/IT)

DATE: 26-02-2016 TIME: 02:00 pm to 03:15 pm TOTAL MARKS: 30

Instructions:
1. All the questions are compulsory.
2. Figures to the right indicate full marks.
3. Assume suitable data if required.

Q.1 (a) Explain .Net Framework Architecture in Detail with figure. [05]
(b) Define 1) MSIL 2) CLS 3) CTS. [03]

Q.2 (a) Explain the Life Cycle of ASP.NET Pages. [06]
(b) Explain following Terms:
   1) Namespace
   2) Garbage collection.[05]

OR

Q.2 (a) Explain Reflection API with Example. [05]
(b) Explain Validation Control With Example. [06]

Q.3 (a) What is inheritance? Create C#.NET console application to define shape class and derive circle and rectangle from it to demonstrate inheritance. [06]
(b) Explain Rich Server Control With Example. [05]

OR

Q.3 (a) Write a program to insert the data (FirstName, LastName, Gender, City) into Database in ASP.NET C#. [06]
(b) What is Constructor? Explain with example. [05]
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**BE - SEMESTER–VI • MID SEMESTER-I EXAMINATION – SUMMER 2016**

**SUBJECT: DATA COMPRESSION & DATA RETRIEVAL (2161603) (IT)**

**DATE: 24-02-2016**

**MARKS:30**

**TIME:02:00 PM to 03:15 PM**

**TOTAL**

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**Instructions:**
1. All the questions are compulsory.
2. Figures to the right indicate full marks.
3. Assume suitable data if required.

| Q.1 | (a) Give difference between Lossy and Lossless Compression. | [02] |
| (b) What is Data Compression? Explain different parameters used to evaluate performance of any compression algorithm. | [03] |
| (c) Explain Markov Model in brief. | [03] |

| Q.2 | (a) Determine the Huffman code with the given probabilities. | [05] |
| \[ P(a2) = 0.4, P(a1) = 0.2, P(a3) = 0.2, P(a4) = 0.1, P(a5) = 0.1 \] | |
| (b) USE DIAGRAM CODING \( A=\{a,b,c,d,r\}\) and \( ab, ac, ad \) are frequently occurring patterns. Encode the sequence \( abcdraababra \) | [04] |
| (c) What is uniquely decodable code, explain? Determine whether the following codes are uniquely decodable or not. | [02] |
| 1. \( \{0,01,11,111\} \) | |
| 2. \( \{1,10,110,111\} \) | |

**OR**

| Q.2 | (a) Explain Compression = Modeling + Coding. | [05] |
| (b) Draw zero order context , first order context and second order context for the sequence \( thisibisibh \) | [04] |
| (c) Explain minimum Description Length Principle. | [02] |

| Q.3 | (a) Solve using LZ77—window size =13 and look ahead buffer =6 Encode the sequence \( Cabracaabrrarrarrad \) | [06] |
| (b) 6) find L AND INDEX--X VALUE USING BORROWS WHEELER TRANSFORM for the sequence \( ABRACAD \) | [05] |

**OR**

| Q.3 | (a) Consider three \( Alphabet=\{a1,a3,a2\} \) with \( p(a1)=0.7,p(a2)=0.1,p(a3)=0.2 \), use Arithmetic Coding to solve this and find the TAG. | [06] |
| (b) Decode the sequence \( ---3\ 1\ 4\ 6\ 8\ 4\ 2\ 1\ 2\ 5\ 10\ 6\ 11\ 13\ 6 \) using LZW Initial dictionary is \( a=1,b=2,r=3,t=4 \) | [05] |