



**University of Colombo, Sri Lanka**



*University of Colombo School of Computing*



**DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY  
( EXTERNAL)**

Academic Year 2022 — 2<sup>nd</sup> Year Examination — Semester 4

**IT4206 — Enterprise Application Development**

*Part 1 - Multiple Choice Question Paper*  
(1 Hour)

**Important Instructions**

- This paper has **two (2) parts, Part 1 and Part 2**.
- The duration of this part (Part 1) is **1 Hour**.
- The medium of instructions and questions is English.
- This paper has **25 questions** on **8 pages**. Answer **all** questions.
- All questions are of the **MCQ** (Multiple Choice Questions) type.
- Each question will have **5 (five)** choices with **one or more** correct answers.
- This paper consists of 100 marks and all the questions will carry equal marks.
- There will be a penalty for incorrect responses to discourage guessing.
- The mark given for a question will vary from -1 (All the incorrect choices are marked & no correct choices are marked) to +1 (All the correct choices are marked & no incorrect choices are marked). However, **the minimum mark per question would be zero**.
- Answers should be marked on the **special answer sheet** provided.
- Note that questions appear on both sides of the paper. If a page is not printed, please inform the supervisor/invigilator immediately.
- Mark the correct choices on the question paper first and then transfer them to the given answer sheet which will be machine marked. **Please completely read and follow the instructions given on the other side of the answer sheet before you shade your correct choices.**
- Calculators are **not** allowed.
- *All Rights Reserved.* This question paper can NOT be used without proper permission from the University of Colombo School of Computing.

1). Among the following programming languages, what is the programming language which is the base for *Django* framework?

- |            |          |         |
|------------|----------|---------|
| (a) Python | (b) Java | (c) PHP |
| (d) C++    | (e) C    |         |

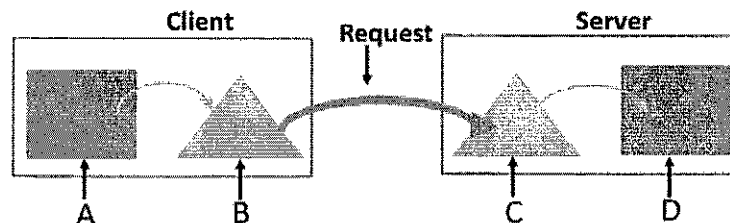
2). Select the most suitable keywords for blank **A** and blank **B** of the following code segment.

```
import java.rmi.Remote;
import java.rmi.RemoteException;

public interface bitExam extends <----A----> {
    public int getExamPaper(int courseCode) throws <----B----> ;
}
```

- |   |
|---|
| (a) A - class , B - implements          |
| (b) A - implements, B - RemoteException |
| (c) A - class, B - return               |
| (d) A - Remote, B - RemoteException     |
| (e) A - Remote, B - implements          |

Answer questions 3 to 4 using the following diagram which shows a client requests a service from a server.



3). Select the **correct** statement regarding the component labeled as B in the given diagram.

- |  |
|--|
| (a) Is within the same heap of server app.   |
| (b) It does not have the method logic.       |
| (c) Gets the return values from the service. |
| (d) Unpack the request from B.               |
| (e) Invoke the real method.                  |

4). Select the **incorrect** statement regarding the component labeled as C in the given diagram.

- (a) It is pretend to be the service object.
- (b) Client calls the B as it calls the actual service.
- (c) It is pretend to be the service object.
- (d) Is within the same heap of client app.
- (e) It does not have the method logic.

5). What is the architecture which exchange data between application and the internal or external system using protocols such as RMI/SOAP/REST?

- (a) Combined web and business logic component-based architecture
- (b) Web-centric architecture
- (c) Web service application architecture
- (d) Business-to-Business architecture
- (e) Web component-based architecture

6). What is the status of the following HTTP respond.

```
Hypertext Transfer Protocol
HTTP/1.0 200 OK\r\n
Server: SimpleHTTP/0.6 Python/3.9.12\r\n
Date: Tue, 13 Jun 2023 07:20:09 GMT\r\n
Content-type: text/html; charset=utf-8\r\n
Content-Length: 5449\r\n
```

- (a) It is an informational message
- (b) It is a success message
- (c) It is a redirection
- (d) It is a client error
- (e) It is a server error

7). What is the correct HTTP method which should be used to submit information to the server for further processing?

- |             |          |            |
|-------------|----------|------------|
| (a) GET     | (b) POST | (c) DELETE |
| (d) OPTIONS | (e) HEAD |            |

8). Select a popular web server which is run on Microsoft.net platform.

- |            |           |            |
|------------|-----------|------------|
| (a) Apache | (b) Nginx | (c) Chrome |
| (d) Edge   | (e) IIS   |            |

9). Which of the following is the communication protocol used to create a non-persistent connection between the client and the server, requiring the initiation of multiple TCP connections to transmit multiple objects?

- |              |              |              |
|--------------|--------------|--------------|
| (a) HTML/1.0 | (b) HTML/1.1 | (c) HTML/2.0 |
| (d) HTTP/1.0 | (e) HTTP/1.1 |              |

10). <servlet-name> and <servlet-class> are two parameters that should be defined in the deployment descriptor. In which block these two parameters should be defined?

- |                       |
|-----------------------|
| (a) <servlet-class>   |
| (b) <servlet-mapping> |
| (c) <servlet-name>    |
| (d) <servlet>         |
| (e) <url-pattern>     |

11). Where the deployment descriptor should be placed in the directory structure of the servlet application?

- |   |
|---|
| (a) Inside the <i>WEB-INF</i> directory |
| (b) Inside the <i>src</i> directory     |
| (c) Inside the <i>root</i> directory    |
| (d) Inside the <i>servlet</i> directory |
| (e) Inside the <i>htdocs</i> directory  |

Answer questions 12 to 16 using the following code segment of a servlet application.

```
import javax.servlet.*;
import javax.servlet.http.*;
import java.io.*;
import java.util.*;

public class bitexam extends <-----A-----> {

    public void doGet(HttpServletRequest <-----B----->,
        HttpServletResponse <-----C-----> )

        throws ServletException , IOException {

        PrintWriter out = response.getWriter();
        out.println("<html >");
        out.println("<head >");
        out.println("<title >IT4206 </title >");
        out.println("</head >");
        out.println("<body >");
        out.println("<h1 >");
        out.println("IT 4206 Exam Paper");
        out.println("</h1 >");
        out.println("</body >");
        out.println("</html >");
    }
}
```

12). What is the purpose of using HttpServletRequest in the above code segment?

- (a) Used to handle specifically the HTTP requests.
- (b) Used to handle responses from the servlet to the clients.
- (c) Used to access the text field in the HTML file from the servlet.
- (d) Used to transfer requests between servlets.
- (e) Used to forward a request from a servlet to another resource.

13). What is the appropriate keyword to be used in blank A?

- |                     |                         |                   |
|---------------------|-------------------------|-------------------|
| (a) ServletResponse | (b) HttpServletResponse | (c) ClientRequest |
| (d) ClientRespond   | (e) HttpServlet         |                   |

14). According to the given code what should be the correct keyword to be used in blank C?

- |               |              |                 |
|---------------|--------------|-----------------|
| (a) exception | (b) response | (c) ioexception |
| (d) servlet   | (e) request  |                 |

15). What should be the correct term that has to be included within the `<servlet-class>` and `</servlet-class>` tags of the corresponding deployment descriptor?

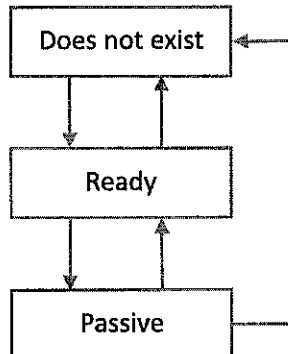
- |                                     |                                  |             |
|-------------------------------------|----------------------------------|-------------|
| (a) <code>HttpServletRequest</code> | (b) <code>ServletResponse</code> | (c) bitexam |
| (d) class                           | (e) IT4206                       |             |

16). The following command was used to compile the above mentioned servlet application. What should be the correct term to be used in blank X?

```
javac -cp /root/lib/servlet-api.jar -d ../WEB-INF/classes <-X->
```

- |                  |                       |                  |
|------------------|-----------------------|------------------|
| (a) bitexam.java | (b) FirstServlet.java | (c) servlet.java |
| (d) class.java   | (e) IT4206.java       |                  |

17). Life cycle of which Java Bean is shown in the following figure?



- |                            |                          |                             |
|----------------------------|--------------------------|-----------------------------|
| (a) Entity Beans           | (b) Message driven beans | (c) Singleton session beans |
| (d) Stateful session beans | (e) Request beans        |                             |

18). What is the Java annotation that can be used to decorate a method which is obsolete and the compiler should provide a warning when compiling?

- |                            |                              |                                    |
|----------------------------|------------------------------|------------------------------------|
| (a) <code>@Override</code> | (b) <code>@Deprecated</code> | (c) <code>@SuppressWarnings</code> |
| (d) <code>@Obselete</code> | (e) <code>@Warning</code>    |                                    |

- 19). What is the Java API which allows to access most of the tabular data sources from the Java programming language?

(a) JDBC	(b) JBO	(c) JMF
(d) JAI	(e) JPBA	

Answer questions 20 to 22 based on the following code segment which used to create a connection with the DBMS.

```
Connection <-A-> = DriverManager.getConnection  
(" <-X->:mysql://localhost:<-B->/<-C->", "<-D->", "<-E->");
```

```
Statement stmt = con.createStatement();  
String insertUser = "INSERT INTO loginTbl (uname, pass)  
    values ('"+username+"', '"+password+"')";  
stmt.executeUpdate(insertUser);  
stmt.close();  
con.close();
```

- 20). Among the locations marked from A to E, what is the correct location to put the name of the database?

(a) A	(b) B	(c) C
(d) D	(e) E	

- 21). What is the correct keyword that should be included in the location marked as X?

(a) http	(b) https	(c) java
(d) javaee	(e) jdbc	

- 22). What should be the correct term that should be used in blank A?

(a) insertUser	(b) con	(c) stmt
(d) uname	(e) pass	

23). What is the correct code segment to destroy a session?

- (a) session.invalidate()
- (b) session.remove()
- (c) session.destroy()
- (d) session.stop()
- (e) session.close()

24). What is the correct parameter that should pass to in the blank A to create a cookie?

`Cookie cookie = new Cookie(<-A->, <-B->);`

- |           |                    |             |
|-----------|--------------------|-------------|
| (a) URL   | (b) hyperlink      | (c) session |
| (d) Value | (e) Attribute name |             |

25). Which of the following annotation of JAX RS API assigns a default value to a parameter passed to method?

- |                   |                |                  |
|-------------------|----------------|------------------|
| (a) @DefaultValue | (b) @FormParam | (c) @CookieParam |
| (d) @Produces     | (e) @Context   |                  |

\*\*\*\*\*