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**[5263]-601**

**T.Y. B.C.A. (Sixth Semester) EXAMINATION, 2017**

**601 : ADVANCED WEB TECHNOLOGIES**

**(2013 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 80**

**N.B. :— (i) All questions are compulsory.**

**(ii) Figures are required whenever necessary.**

**1. Attempt the following (any *eight*) : [8×2=16]**

- (a) What is serialization ?**
- (b) Name any *two* functions to extract basic information about classes in php ?**
- (c) Name any *two* variables of global array.**
- (d) How to check whether a variable is set with the session ?**
- (e) Name any *two* parameters of mysql\_connect( ).**
- (f) Explain the function to execute the query with parameters.**
- (g) Name any *two* elements of XML document structure.**
- (h) Which are the types of parser in XML ?**
- (i) Which are the parts of XML-RPC ?**
- (j) Enlist the methods of XML HTTPREQUEST object.**

**P.T.O.**

**2.** Attempt the following (any *four*) : [4×4=16]

- (a) What is interospection ? Explain any *two* introspective function.
- (b) What is self-processing form ? Explain with the help of program.
- (c) What is PEAR-DB library ? Explain its function with example.
- (d) Explain XML document structure.
- (e) Write a PHP script to upload the file and display its information (Use `$_FILES`).

**3.** Attempt the following (any *four*) : [4×4=16]

- (a) Explain WSDL document structure.
- (b) Explain AJAX web application model.
- (c) Write a php program to accept two strings from user and check whether entered strings are matching or not (use sticky form concept).
- (d) Write a php program to accept student details (rno, name, class) and store them in student table. Print them in sorted order of name on the browser in table format.
- (e) Write PHP script to create a CD catalog using XML file.

**4.** Attempt the following (any *four*) : [4×4=16]

- (a) Explain cookie with example.

- (b) Explain simple XML with example.
  - (c) What is database ? Explain different functions in php to connect to the mysql.
  - (d) Write an Ajax program to display list of games stored in an array on clicking OK button.
  - (e) Write php program to select name of fruits he/she likes (using multivalued parameters).
5. Write short notes on (any *four*) : [4×4=16]
- (a) Constructor
  - (b) Setting response header
  - (c) SOAP
  - (d) XML parser
  - (e) Session.

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**[5263]-602**

**B.C.A. (Semester VI) EXAMINATION, 2017**

**602 : ADVANCE JAVA**

**(2013 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 80**

- N.B. :** (i) All questions are compulsory.  
(ii) Figures to the right indicate full marks.  
(iii) Answer of sub-questions of each question should be attempted at one place. It should not be written separately.

**1.** Attempt the following (any *eight*) : [8×2=16]

- (a) What are different types of Servlets ?
- (b) What is accept( ) method in networking ?
- (c) Give Syntax of loading DriverManager.
- (d) What is Introspection ?
- (e) What is RMIRegistry ?
- (f) What is JAR File ?
- (g) What is difference between CGI and Servlet ?
- (h) What is Prepared\_Statement ?
- (i) What is UnicastRemoteObject ?
- (j) What is getLocalHost( ) Method ?

P.T.O.

**2.** Attempt the following (any *four*) : [4×4=16]

- (a) Explain JDBC Architecture with suitable diagram.
- (b) What is Thread ? Explain different ways to create Thread in program ?
- (c) Explain RMI Architecture with suitable diagram.
- (d) Write a JDBC program to search all details of employee(empid, ename, city) who are living in city ‘Pune’.
- (e) Write a multithreading program in java to display all the vowels from a given String. (Use Thread Class)

**3.** Attempt the following (any *four*) : [4×4=16]

- (a) What is Statement ? Explain its different types.
- (b) Explain Thread Life Cycle with suitable diagram.
- (c) Explain Socket and ServerSocket.
- (d) Write a java program which will display name and priority of current thread. Change name of Thread to MyThread and priority to 2. Display the details of Thread.
- (e) Write a JDBC program to accept the details of Author (Aid, Aname, Bname, and Price) and store it into the database (Use PreparedStatement interface.)

**4.** Attempt the following (any *four*) : [4×4=16]

- (a) What is Bean ? Explain advantages of Bean.
- (b) What is stub and skeleton ? Explain.

- (c) Explain how Session Tracking is achieved Servlets ?
- (d) Write a Multithreading program in java to display the number's between 1 to 100 continuously in a TextField by clicking on button. (Use Runnable Interface).
- (e) Write a JSP program to calculate sum of first and last digit of a given number. Display sum in Red Color with font size 18.

5. Attempt the following : [2×8=16]

- (a) Write a Socket program in java in which client accept a number, send it to the server and check whether it is prime or not.

*Or*

Write socket based java program to accept message from client converts the message into all uppercase letters and sends back the same to the client. Write both client and server programs.

- (b) Write a JSP script to accept the details of Student (RNo, SName, Gender, Computer\_Knowledge, and Class) and display it on the browser. Use appropriate controls for accepting data.

*Or*

Write a program for making a registration form which collects Id, Name, Address and email address send this data to a Servlet that display it.

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**[5263]-603**

**B.C.A. (Sem. VI) EXAMINATION, 2017**

**603 : RECENT TRENDS IN I.T.**

**(2013 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 80**

**N.B. :— (i) All questions are compulsory.**

**(ii) All questions carry equal marks.**

**(iii) Draw a neat diagram wherever necessary.**

**1. Define the terms : [8×2=16]**

**(a) Define the term metrics.**

**(b) Define fragmentation.**

**(c) What is allocation ?**

**(d) What is cryptography ?**

**(e) Define the term DES.**

**(f) What is green computing ?**

**(g) List the types of OLAP.**

**(h) What is data cleaning ?**

P.T.O.

**2.** Answer the following (any *four*) : [4×4=16]

- (a) Describe Software Quality Management in detail.
- (b) Write on :
  - (1) Homogenous Distributed Database System
  - (2) Heterogenous Distributed Database System.
- (c) What is Data Warehouse ? Write on Architecture of Data Warehouse.
- (d) Distinguish between private key and public key cryptography.
- (e) Describe cloud computing model in detail.

**3.** Answer the following (any *four*) : [4×4=16]

- (a) What is Requirement Analysis ? Describe steps of requirement analysis in detail.
- (b) Write on Architecture of Distributed Database.
- (c) Differentiate Standalone and Distributed Database.
- (d) Describe in detail advantages and disadvantages of Data Warehouse.
- (e) What is Neural Network ? Describe need and applications of neural network.

**4.** Answer the following (any *four*) : [4×4=16]

- (a) What is Soft Computing ? Describe its applications.
- (b) Explain substitution cipher techniques in detail.

- (c) What is Pre-processing ? Describe its need in detail.
  - (d) What is Distributed Database System ? Describe the needs for building Distributed Database.
  - (e) Describe the steps in Prototyping Model.
5. Answer the following (any *four*) : [4×4=16]
- (a) What is object oriented modeling ? Describe in detail.
  - (b) What is Data Replication ? Describe its types in detail.
  - (c) Write on the Process of Data Warehouse Design.
  - (d) What is Mobile Computing ? Describe its applications in detail.
  - (e) Describe the components of Distributed Database.

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**[5263]-604**

**T.Y. B.C.A. (Sem. VI) EXAMINATION, 2017**

**604 : SOFTWARE TESTING**

**(2013 PATTERN)**

**Time : Three Hours**

**Maximum Marks : 80**

**N.B. :— (i) All questions are compulsory.**

**(ii) Figures to the right indicate full marks.**

**1. Attempt the following (any eight) : [8×2=16]**

**(i) Define measure in software metric.**

**(ii) Define Debugging.**

**(iii) What is Gray-Box testing ?**

**(iv) State all the factors of Testability of Software.**

**(v) Explain the advantages and disadvantages of sandwich approach of integration.**

**(vi) What is Stub ?**

**(vii) Why is there need of Test Automation ?**

**(viii) Define Validation Testing.**

**(ix) Explain sub-system testing.**

**(x) Explain TSL.**

P.T.O.

**2.** Attempt any *four* of the following : [4×4=16]

- (i) Explain Acceptance testing in detail.
- (ii) Explain Boundary-value analysis.
- (iii) Explain all the testing principles in detail.
- (iv) Explain Behavioural testing in detail.
- (v) Explain TMeter as a testing tool in detail.

**3.** Attempt any *four* of the following : [4×4=16]

- (i) Explain Testing Process in detail with diagram.
- (ii) Explain bottom-up approach of integration testing.
- (iii) Explain function-oriented metric.
- (iv) Explain how testing of GUIs is done.
- (v) Explain Load Runner as a testing tool.

**4.** Attempt any *four* of the following : [4×4=16]

- (i) Explain the Big-Bang approach of Integration testing.
- (ii) Explain documentation testing in detail.
- (iii) Give difference between load and stress testing.
- (iv) Explain cyclometric complexity with example. Calculate and show independent paths using cyclometric complexity.
- (v) Explain Tunit as a testing tool.

**5.** Write short notes on (any *four*) : [4×4=16]

- (i) Performance Testing
- (ii) Branch-Coverage Criteria
- (iii) Unit Testing
- (iv) Security Testing
- (v) Rational Robot.