AD-111

April-2016

B.C.A. Sem.-VI

SEC-302(1) Mobile Application Development

Time : 3 Hours]   **[Max. Marks : 70**

Instructions :
    (1)   **All** the questions are compulsory.

                (2)   Figure to be right indicate full marks.

                (3)   Begin new question on new pages.

1.   (A)   Attempt the following :

           (1)   Write characteristics of Mobile Computing.   **4**

           (2)   Explain Frequency Division Multiple Access (FDMA).   **3**

OR

Attempt the following :

           (1)   Write a structure of Mobile Computing Application.   **4**

           (2)   Explain Time Division Multiple Access (TDMA).   **3**

    (B)   Write a short note on Global System for Mobile Communications (GSM).   **7**

OR

Write a short note on General Packet Radio Service (GPRS).   **7**

2.   (A)   Attempt the following :

           (1)   Write a short note on Indirect TCP (I-TCP).   **4**

           (2)   Write key features of the Palm OS.   **3**

OR

Attempt the following :

           (1)   Explain Android OS.   **4**

           (2)   Explain Freeze – TCP.   **3**

    (B)   Write a short note on Mobile IP.   **7**

OR

Explain constraints and requirements of Mobile OS.   **7**

3. (A) Attempt the following :

   (1) Write steps for creating Emulator. **4**

   (2) Explain application class. **3**

   OR

   Attempt the following :

   (1) Write steps for creating new Android Project. **4**

   (2) Explain Manifest file. **3**

   (B) How user can implement own activity ? Explain with sample code. **7**

   OR

   Write a short note on Intent Class. **7**

4. (A) Attempt the following :

   (1) Explain Resource Folder. **4**

   (2) Explain View Group. **3**

   OR

   Attempt the following :

   (1) How user can create own view ? Explain. **4**

   (2) Explain value folder. **3**

   (B) Write a short note on Relative Layout. **7**

   OR

   Write a short note on Liner Layout. **7**

5. Multiple Choice Questions : **14**

   (1) What is Mobile Computing ?

      (a) Computing on only laptop

      (b) Provide mobility while computing on any digital device

      (c) Computing on only mobile

      (d) Computing on only PC

(2) Which protocols is used for Wireless Communication ?

(a) IEEE 802.5　　　　　　(b) IEEE 802.7

(c) IEEE 802.11　　　　　　(d) IEEE 802.12

(3) For mobile communication each area is divided in _____.

(a) Sector　　　　　　　　(b) Cell

(c) Hector　　　　　　　　(d) None of all

(4) Second generation mobile worked based on _____.

(a) GSM　　　　　　　　　(b) GPRS

(c) UMTS　　　　　　　　(d) NMT

(5) CoA stands for _____.

(a) Copy-of-Address　　　　(b) Care-of-Acceptance

(c) Care-of-Address　　　　(d) Cut-of-Address

(6) Agent discovered by _____ scheme.

(a) Agent Solicitation　　　(b) Agent Finding

(c) Tunneling　　　　　　(d) Tunneling finding

(7) FA stand for _____.

(a) Foreign agent　　　　　(b) Foreign agent network

(c) Forced action　　　　　(d) Forced acceptation

(8) HTTP stand for _____.

(a) Hyper Text Transmission Protocol

(b) Hyper Text Transfer Protocol

(c) Hyperlink Text Test Protocol

(d) Hyperlink Transfer Text Protocol

(9) Extension of Manifest file is _____.

(a) .js　　　　　　　　　　(b) .xml

(c) .java　　　　　　　　　(d) .htm

(10) In activity life times first method called is _____.

(a) onCreate()　　　　　　(b) onStart()

(c) Onresume()　　　　　　(d) onPause()

(11) Emulator is also known as _____.

    (a)   Android Virtual Device   (b)   Admin Visual Device

    (c)   Android Virtual Data   (d)   No of all

(12) The _____ class is Supclass for all the android display object.

    (a)   Activity   (b)   View

    (c)   Intent   (d)   Data

(13) Each Android resource stored in _____ folder with several subfolders inside.

    (a)   Layout   (b)   Data

    (c)   res.   (d)   Intent

(14) 1 dp = _____ pixels.

    (a)   2   (b)   2.5

    (c)   1.5   (d)   3

_____

AD-111

April-2016

B.C.A. Sem.-VI

SEC-302(2) : Website Frameworks (Joomla, ROR)

Time : 3 Hours]   **[Max. Marks : 70**

1. (A) Discuss Content Management System. Write about Joomla.   **7**

   OR

   Discuss creation of new article with various options and parameters.

   (B) Why do we create categories in Joomla ? Discuss category manager.   **7**

   OR

   What is front-end and back-end in Joomla ? Discuss any two menus in Joomla.

2. (A) Explain how to install new template in Joomla.   **7**

   OR

   Discuss Menu Manager in Joomla.

   (B) What are extensions ? How do we add an extension in Joomla.   **7**

   OR

   Discuss User manager.

3. (A) Discuss some of the parameters in Global configuration.   **7**

   OR

   Explain variables in Ruby with examples.

   (B) Explain case statement in ruby.   **7**

   OR

   Explain if statement with example in ruby.

4. (A) Explain with example while and for loop in ruby. **7**

OR

Discuss the methods to compare and concatenate strings with example.

(B) Discuss arrays in ruby and how to access the elements of an array. **7**

OR

Discuss Rails.

5. State whether True/False. **14**

(1) Ruby is an interpreted language.

(2) Categories helps to organize the media more conveniently.

(3) User manager helps in creating users.

(4) /* is used as comment in ruby.

(5) Rails is written in Python.

(6) Featured articles are displayed on home page.

(7) FOSS stands for free open source software.

(8) Joomla does not support multiple languages.

(9) WAMP stands for windows, apache, mysql and python.

(10) Strings can be created with new method in ruby.

(11) *Freeze* method is used to compare strings.

(12) irb is an interactive command line environment for ruby.

(13) TinyMCE is the default editor in Joomla.

(14) Banner manager is used to add ads in the website.

_____

AD-111

April-2016

B.C.A. Sem.-VI

SEC-302(3) : Website Development-II (PHP, AJAX) (Theory + Practical)

Time : 3 Hours]   **[Max. Marks : 70**

1. (a) Answer the following :

     (1) Define XAMPP and explain its characteristics.   **4**

     (2) How variables are declared in PHP ? Explain with example.   **3**

<p align="center">OR</p>

     (1) Write a short note on PHPMyAdmin and its functions.

     (2) Explain the use of comments in PHP script with example.

   (b) Answer the following :

     (1) Explain various looping statements in PHP with examples.   **4**

     (2) Write a short note on PHP operators.   **3**

<p align="center">OR</p>

     (1) How conditional statements are used in PHP ? Explain with proper examples.

     (2) Write a short note on Multi-dimensional array.

2. (a) List the steps required for searching records from the table. Explain with HTML and PHP Script.   **7**

<p align="center">OR</p>

   List the steps required for inserting a record into the table. Explain with HTML and PHP Script.

   (b) Answer the following :

     (1) Write a short note on Global Variables in PHP.   **4**

     (2) What is the use of mysql_numrows() with example.   **3**

<p align="center">OR</p>

     (1) Write a short note on functions in PHP.

     (2) What is the use of $_POST with example.

3. (a) List the steps required to place asynchronous request to the server using XMLHttpRequest object. Explain with suitable example. **7**

OR

Write and explain AJAX script to process POST request of the XMLHttpRequest object.

(b) Answer the following :

(1) Write a short note on AJAX Web Model. **4**

(2) Explain DOM with example. **3**

OR

(1) Write a short note on Traditional Web Application Model.

(2) Explain how to access Javascript function using Hyperlink.

4. (a) Using PHP, JavaScript and AJAX, create a combo box named "courses" with three items BCA, BBA, B.Com displayed in it. Send the selected course item to the server through an XMLHttpRequest object and display a server response on webpage. **7**

OR

Using AJAX, PHP and MySQL, write a code to place an asynchronous request (through hyperlink of product "camera") to access the desired data (item_code, item_name, quantity, price) of "product" table from the "shopping" database on server.

(b) Answer the following :

(1) Explain web service, its model and advantages. **4**

(2) Explain with example to validate if any field is left blank or with less sized data. **3**

OR

(1) Explain SOAP framework.

(2) Explain with example to validate an email-id using regular expression.

5. Do as directed : **14**

    (1) PHP is an open source, _____ side scripting language with no license fees.

    (2) All the variables in PHP starts with $ sign symbol followed by either _____ or _____.

    (3) XMLHTTPRequest status code _____ indicates "no error".

    (4) _____ method is used to close the connection to the server.

    (5) AJAX stands for _____.

    (6) PHP code is written between <?php and /php?> tags. (T/F)

    (7) $_REQUEST is used to collect the information sent by GET or POST method.   (T/F)

    (8) Associative Array contains data in pair of key-value. (T/F)

    (9) WAMP stands for Windows AJAX Mysql PHP. (T/F)

    (10) Web client is the service, useful to applications for Cross platform & Cross Programming Language communications. (T/F)

    (11) CSS can be integrated into HTML as

        (a) Internal   (b) External

        (c) Inline   (d) All of the above

    (12) To stop the execution of PHP Script, the command is

        (a) die   (b) dead

        (c) destroy   (d) None of the above

    (13) What is the output of the following code ?

        $num = array ("one" => 1, "two" => 2, "three" => 3);

        echo $num["two"];

        (a) two   (b) 3

        (c) 1   (d) 2

    (14) UDDI stands for

        (a) Uniform Discovery Description and Integration

        (b) Uniform Description Discovery and Integration

        (c) Uniform Discovery Distribution and Integration

        (d) Uniform Distribution Discovery and Integration

_____

AD-111

April-2016

B.C.A. Sem.-VI

SEC-302(4) Information Security

Time : 3 Hours]   **[Max. Marks : 70**

1. (A) Discuss : The information security common body of knowledge. **7**

   OR

   Discuss : The information security principles of success.

   (B) Answer the following :

   (i) Write a note on computer forensics. **4**

   (ii) Discuss the common law of Judicial Branch of the legal system. **3**

   OR

   What are the different types of computer crime ? How are these crimes committed ? **7**

2. (A) What are the different types of physical security threats ? Also explain the administrative controls of providing physical security. **7**

   OR

   What are the operation security principles ? Also explain the operations security process controls.

   (B) Answer the following :

   (i) What is meant by Perimeter Security Controls and Badging of physical security ? **4**

   (ii) Explain the use of smart cards as technical control for physical security. **3**

   OR

   Explain the significance of Documentation, Maintenance and Interdependencies in operations security. **7**

3. (A) Explain the significance of multifactor authentication and biometrics in information security. **7**

   OR

   Explain Hashing Functions and Block Ciphers of digital cryptography.

(B) Answer the following :

(i) Write a note SSL Protocol. **4**

(ii) Discuss Digital Certificates. **3**

OR

Explain the Mandatory and Role Based Access Controls. **7**

4. (A) What are the different types of malware ? Also explain the antivirus software. **7**

OR

Write a detailed note on intrusion detection system.

(B) Answer the following :

(i) What is meant by packet filtering ? Explain the benefits of using packet filtering. **4**

(ii) Write a note on Firewalls. **3**

OR

Write a detailed note on SDLC. **7**

5. (A) Fill in the blanks : **7**

(1) _____ refers to the known problem within the system or program.

(2) _____ law regulates the behaviour of the administrative agencies of government.

(3) _____ security is used to identify the controls over software, hardware, media and the operators and administrators who possess elevated access privilege to any of these resource.

(4) Copying or downloading software and using without permission is known as _____.

(5) A _____ disguises messages, allowing only selected people to see through disguise.

(6) _____ was designed to facilitate remote login to computer via the internet for terminal session.

(7) A _____ is an application level gateway that is specifically armored and protected against attacks.

(B) State True or False : **7**

    (1)   Motion detectors detect unusual movements within a well defined interior space.

    (2)   The administrative law is also referred as natural justice.

    (3)   The objective of the principle of least privilege is to give the people the maximum amount of access to a system that is needed to perform the job they are doing.

    (4)   Kerberos is designed to provide authentication for distributed systems.

    (5)   The Transport Layer Security (TLS) protocol is designed to provide communications privacy over the internet.

    (6)   Security consultants and network engineers design and implement network infrastructure that are built with security in mind.

    (7)   Misuse intrusion is based on observation of deviations from normal system usage pattern.

_____