

Seat No. : \_\_\_\_\_

**MO-139**

**March-2019**

**B.C.A., Sem.-VI**

**SEC-302 : (1) Mobile Application Development**

**Time : 2:30 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) Answer the following questions :

- (i) Explain in detail GSM Services. 7
- (ii) What is Mobile computing ? What is difference between Mobile Computing vs. Wireless Networking ? 7

**OR**

- (i) Explain in detail FDMA(Frequency Division Multiple Access) and TDMA (Time Division Multiple Access)
- (ii) Explain GPRS in detail.

(B) MCQS : (Any **four** out of **six**) **4**

- (1) For Cellular Mobile Communication, each area is divided in \_\_\_\_\_.
  - (a) hector
  - (b) cell
  - (c) sector
  - (d) None of the above
- (2) CSMA stands for
  - (a) Carrier Sense Mixed Access
  - (b) Collision Suit Multiple Access
  - (c) Collision Sense Multiple Access
  - (d) Carrier Sense Multiple Access
- (3) Second Generation Mobile worked based on \_\_\_\_\_.
  - (a) GPRS
  - (b) GSM
  - (c) UMTS
  - (d) AMPS
- (4) GSM provides which categories of services ?
  - (a) Supplementary Services
  - (b) Tele Services
  - (c) Both (a) & (b)
  - (d) None of the above



- (5) CDMA stands for
- (a) Code Division Multiple Access
  - (b) Care Division Multiple Access
  - (c) Code Division Multiple Action
  - (d) Code Define Multiple Access
- (6) \_\_\_\_\_ is not the components of radio system.
- (a) Mobile Station
  - (b) Mobile Switching Center
  - (c) Base Station Subsystem
  - (d) Base Station Controller

2. (A) Answer the following questions :

- (i) Explain constraints of Mobile Operating System.
- (ii) What is Snooping TCP (S-TCP).

7  
7

**OR**

- (i) Explain Architecture of TCP/IP.
- (ii) Write key features of the Palm OS.

(B) MCQS : (Any **four** out of **six**)

4

- (1) M-TCP stands for \_\_\_\_\_.
  - (a) Main TCP
  - (b) Mobile TCP
  - (c) Mixed TCP
  - (d) None of the above
- (2) HTTP stands for \_\_\_\_\_.
  - (a) Hyper Text Transmission Protocol
  - (b) Hyper Text Transfer Protocol
  - (c) Hyperlink Text Test Protocol
  - (d) Hyperlink Transfer Text Protocol
- (3) MIME stands for
  - (a) Multipurpose Internet Mail Extensions
  - (b) Mix Internet Mail Extensions
  - (c) Multiple Internet Mail Extensions
  - (d) Multipurpose Internet Message Extensions
- (4) \_\_\_\_\_ is the TCP/IP Protocol Layer.
  - (a) Application Layer
  - (b) Transport Layer
  - (c) Network Access Layer
  - (d) All of the Above
- (5) It is a Software service available on the Internet that is responsible for translating domain name into IP addresses.
  - (a) Domain Name System (DNS).
  - (b) IP Addresses
  - (c) Routers
  - (d) None of the above
- (6) Dynamic Host Configuration Protocol was developed based on \_\_\_\_\_ Protocol.
  - (a) Bootstrap Protocol
  - (b) FTP Protocol
  - (c) TCP/IP Protocol
  - (d) SSID Protocol



3. (A) Answer the following questions :

- (i) Write a note on Android Manifest file. 7
- (ii) Write down steps for creating emulator. 7

**OR**

- (i) Explain Android SDK.
- (ii) Write steps for creating new Android Project.

(B) MCQS : (Any **Three** out of **five**) 3

- (1) Which are the screen sizes in Android ?
  - (a) Small (b) Normal
  - (c) Large (d) All of the Above
- (2) \_\_\_\_\_ is a compiler - generated file that references all the resources found in your project.
  - (a) R. java (b) main.xml
  - (c) AndroidManifest.xml (d) None of the above
- (3) Extension of Manifest file is \_\_\_\_\_.
  - (a) .js (b) .xml
  - (c) .java (d) .htm
- (4) Emulator is also known as \_\_\_\_\_.
  - (a) Android Virtual Device.
  - (b) Admin Visual Device
  - (c) Android Virtual Data.
  - (d) None of the above
- (5) You can shut down an activity by calling its \_\_\_\_\_ method.
  - (a) onDestroy() (b) finishActivity()
  - (c) finish() (d) None of the above

4. (A) Answer the following questions :

- (i) Explain Resource folder. 7
- (ii) Explain View Group. 7

**OR**

- (i) Explain Drawable folder.
- (ii) Write a note on Relative Layout.



(B) MCQS : (Any **Three** out of **five**)

**3**

- (1) Which of the following is not an Android component (i.e. a point from which the system can enter your application) ?
  - (a) Service
  - (b) Activity
  - (c) Layout
  - (d) Content Provider
- (2) What is the name of the folder that contains the R. java file ?
  - (a) src
  - (b) res
  - (c) bin
  - (d) gen
- (3) What does the src folder contain ?
  - (a) Image and icon files
  - (b) XML resource files
  - (c) The application manifest file
  - (d) Java source code files
- (4) What is the parent class of all Activity widgets ?
  - (a) ViewGroup
  - (b) Layout
  - (c) View
  - (d) Widget
- (5) What does the Android project folder "res/" contain ?
  - (a) Java Activity classes
  - (b) Resource files
  - (c) Java source code
  - (d) Libraries



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## SEC-302 : (2) Website Frame Works

Time : 2:30 Hours]

[Max. Marks : 70

1. (A) Answer the following :

- (1) What is Content Management System ? Discuss about Joomla. 7
- (2) List the various menus in Joomla and explain in brief their functionality. 7

OR

- (1) What is front end and back end in Joomla ? Discuss any two menus in Joomla.
- (2) State the difference between static websites and content management systems.

(B) Attempt any four :

4

- (1) Joomla is Content Management System. [T/F]
- (2) Joomla supports multiple languages. [T/F]
- (3) Registered users can work in back end as well as front end in Joomla. [T/F]
- (4) WAMP stands for Windows, Apache, MySQL and Perl. [T/F]
- (5) FOSS stands for free open source software. [T/F]
- (6) In Joomla, Extensions cannot be downloaded. [T/F]

2. (A) Answer the following :

- (1) What are Articles ? Discuss the features of Article manager in Joomla. 7
- (2) Discuss Media Manager in Joomla. 7

OR

- (1) What are Extensions ? How do we add an extension in Joomla ?
- (2) What are templates ? Explain how to install a new template in Joomla.

(B) Attempt any four :

4

- (1) TinyMCE is a type of editor in Joomla. [T/F]
- (2) Using global configuration, the site details can be changed. [T/F]
- (3) In Joomla, Users are created using menu manager. [T/F]
- (4) New templates cannot be downloaded in Joomla. [T/F]
- (5) Home page settings cannot be changed in Joomla. [T/F]
- (6) Shopping cart, registration form, etc. are extensions which can be added in Joomla. [T/F]



3. (A) Answer the following :

- (1) Write a short note on set operations on array in ruby.
- (2) Write a note on variables and constants of ruby.

7  
7

**OR**

- (1) What is Global Configuration ? Explain some options.
- (2) Explain with example if-else if statement in ruby.

(B) Attempt any **three** :

3

- (1) In Joomla, categories help to organize the articles more conveniently. [T/F]
- (2) Modules display content as small blocks on a page. [T/F]
- (3) Media in Joomla is under article manager. [T/F]
- (4) Breadcrumbs are used to show where exactly the user is on the website. [T/F]
- (5) Ruby is written by Matz. [T/F]

4. (A) Answer the following :

- (1) Explain with example case statement in ruby.
- (2) How to create string in ruby ? Explain any three string methods with example.

7  
7

**OR**

- (1) Explain for loop, downto and upto method in ruby.
- (2) Explain unless and until statements.

(B) Attempt any **three** :

3

- (1) Divmod method is used to return array with quotient and modulus. [T/F]
  - (2) -1 index is used to access the last element of array. [T/F]
  - (3) & operator is used to merge two array. [T/F]
  - (4) Bignum class is a base class for numbers. [T/F]
  - (5) eql ? method is used to compare two string objects. [T/F]
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## SEC-302 : (3) Web-Site Development – II (PHP)

Time : 2:30 Hours]

[Max. Marks : 70

- Instructions :**
- (1) Attempt **all** the questions.
  - (2) Make suitable assumptions whenever.
  - (3) Figure to the right indicate necessary full marks.

1. (A) Answer the following :

- (i) List and explain the characteristics of XAMPP. 7
- (ii) Explain conditional statements in PHP. 7

**OR**

- (i) Discuss PHP operators in detail.
- (ii) Compare associative and multidimensional arrays.

(B) Fill in the blanks : (Any **Four** out of **Six**) 4

- (i) XAMPP is PHP \_\_\_\_\_.
- (ii) \_\_\_\_\_ is software in XAMPP used for creating and managing MySQL DB.
- (iii) \_\_\_\_\_ operator is used as a string concatenation in PHP.
- (iv) Every element in associative array is in terms of \_\_\_\_\_ pair.
- (v) PHP programs are kept in \_\_\_\_\_ subfolder.
- (vi) \_\_\_\_\_ term is used in URL to denote PHP script is located on the local web server.

2. (A) Answer the following :

- (i) Explain Http request methods for sending information from one form to another. 7
- (ii) Demonstrate the logic for getting information from the user in PHP. 7

**OR**

- (i) Explain mysql\_selectdb(), mysql\_query() and mysql\_fetch\_array() PHP functions.
- (ii) How are functions declared in PHP ? Implement a function that can access global variables.



- (B) True or False : (Any **Four** out of **Six**) **4**
- (i) \$\_REQUEST array can be only used when client side method is \$\_POST.
  - (ii) Extract() function fetches one record from the resultset.
  - (iii) PHP programs are compile free.
  - (iv) POST method is less secure than GET.
  - (v) mysql\_numrows() returns the number of rows in the resultset.
  - (vi) The third parameter of mysql\_connect() is DB password.
3. (A) Answer the following :
- (i) List and explain the limitations of traditional web applications. **7**
  - (ii) Explain the methods of XMLHttpRequest object. **7**
- OR**
- (i) Explain all the items that are required for implementing AJAX.
  - (ii) List and explain the properties of XMLHttpRequest object.
- (B) Fill in the blanks : (Any **Three** out of **Five**) **3**
- (i) \_\_\_\_\_ provides a tree like structure to the web page.
  - (ii) The full form of AJAX is \_\_\_\_\_.
  - (iii) \_\_\_\_\_ is used for applying styles uniformly.
  - (iv) AJAX use \_\_\_\_\_ tag for displaying dynamic contents.
  - (v) Data communicated on the web server is in \_\_\_\_\_ format.
4. (A) Answer the following :
- (i) Demonstrate the logic of checking blank filed in PHP using Java script. **7**
  - (ii) Explain the methods for producing and consuming the web services. **7**
- OR**
- (i) Implement the logic of validating email id using regular expression.
  - (ii) Explain the working of RPC.
- (B) Define the terms : (Any **Three** out of **Five**) **3**
- (i) WSDL
  - (ii) UDDI
  - (iii) DOM
  - (iv) XML
  - (v) Interoperability
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## SEC-302 : (4) Information Security

Time : 2:30 Hours]

[Max. Marks : 70

1. (A) Answer the following :

- (i) What are the different types of computer crimes and how they are committed ? 7
- (ii) Discuss : The different branches of the legal system. 7

OR

- (i) Discuss : The Information Security Principles of Success.
- (ii) Discuss : Intellectual Property law in detail.

(B) Answer any : (Any Four) 4

- (1) \_\_\_\_\_ are the white hat hackers paid to test the security of newly acquired system.
  - (a) Security Consultants (b) Security Architects
  - (c) Security Testers (d) Security Administrator
- (2) \_\_\_\_\_ work with project development teams to perform risk analysis of new system.
  - (a) Security Consultants (b) Security Architects
  - (c) Security Testers (d) All of the above
- (3) \_\_\_\_\_ models keep data pure and trustworthy by protecting system data from intentional or accidental changes.
  - (a) Confidentiality (b) Integrity
  - (c) Availability (d) None of the above
- (4) \_\_\_\_\_ grants an inventor the right to exclude others from producing or using the inventor's discovery or invention for a limited period of time.
  - (a) Trade Marks (b) Patents
  - (c) Intellectual Property Right (d) All of the above
- (5) People, process and \_\_\_\_\_ are all needed to adequately secure a system or facility.
  - (a) Security (b) Technology
  - (c) Administrators (d) All of the above
- (6) \_\_\_\_\_ laws are written to compensate individuals who were harmed through wrongful acts known as torts.
  - (a) Civil (b) Criminal
  - (c) Regulatory (d) All of the above



2. (a) Answer the following :

- (i) What is meant by Physical Security ? Discuss the physical security controls. 7
- (ii) What are the physical security threats ? Discuss the environmental life safety controls for providing physical security. 7

OR

- (i) Explain the significance of backup and media control in Operation Security.
- (ii) What are the principles of operation security ? Also discuss Operations Security Process Controls.

(b) Answer any : (any **Four**) 4

- (1) Operations security seeks to primarily protect against which of the following ?

- (a) Object reuse (b) Facility disaster
- (c) Comprising emanations (d) Asset threats

- (2) \_\_\_\_\_ devices detects an unusual movements within well-defined interior space.

- (a) Intrusion detectors (b) Alarm system
- (c) Biometrics (d) Motion detectors

- (3) The major of physical security threats includes

- (a) Earthquakes (b) Chemical/Fire
- (c) Hurricanes (d) All of the above

- (4) What is the most secure way to dispose information on a CD-ROM ?

- (a) Physical Damage (b) Sanitizing
- (c) Physical destruction (d) Degaussing

- (5) Intrusion response is a \_\_\_\_\_.

- (a) Preventive control (b) Detective control
- (c) Monitoring Control (d) Reactive control.

- (6) Which of the following is not a media viability control used to protect the feasibility of Data storage ?

- (a) Clearing (b) Marking
- (c) Handling (d) Storage



3. (a) Answer the following :

- (i) Discuss : The significance of Multifactor Authentication and Biometrics in Information Security. 7
- (ii) Discuss the concept of Single Sign-On, Kerberos and Federated identities in detail. 7

OR

- (i) Encrypt and decrypt the following message using transposition method with keyword : PRIVACY. Message is : ANYONE CAN HIDE MESSAGES
- (ii) Discuss: The different implementations of PPK cryptography.

(b) Answer any : (Any **Four**) 3

- (1) What is the term for the verification that the users claimed identity is valid ?
  - (a) Authentication
  - (b) Identification
  - (c) Integrity
  - (d) Confidentiality
- (2) Which access control model is called nondiscretionary access control ?
  - (a) Rule-based Access control
  - (b) Role-based Access control
  - (c) Mandatory Access control
  - (d) Label based Access Control.
- (3) What are the two types of ciphers ?
  - (a) Transposition and substitution
  - (b) Substitution and replacement
  - (c) Transposition and shift
  - (d) None of the above
- (4) What is called the substitution cipher that shifts the alphabet by 13 places ?
  - (a) Caesar cipher
  - (b) ROT13 cipher
  - (c) Transposition cipher
  - (d) All of the above.
- (5) \_\_\_\_\_ is the science or art of breaking cryptosystems.
  - (a) Cryptosystem
  - (b) Cryptography
  - (c) Cryptanalysis
  - (d) Cryptology.

4. (a) Answer the following :

- (i) Write a detailed note on Distributed Systems. 7
- (ii) Discuss : Malware and Anti-virus Software. 7

OR

- (i) Discuss : Different data network types.
- (ii) What is packet filtering ? State and explain different types of packet filtering. Also discuss its advantages and limitations.



(b) Answer any : (Any **Three**)

**3**

- (1) Malicious code that propagates itself by infecting other programs, including OS is known as \_\_\_\_\_.
- (a) Trojan (b) Virus  
(c) Worm (d) Applet.
- (2) An \_\_\_\_\_ is an intranet that allows select users on the outside of the fire-walls to access the site.
- (a) Internet (b) Extranet  
(c) WAN (d) MAN
- (3) Which of the following is not a risk with distributed environment ?
- (a) Software Agents (b) Java Applets  
(c) ActiveX Control (d) A firewall
- (4) Which OSI layer defines how to address the physical devices on the network ?
- (a) Session layer (b) Data link layer  
(c) Application layer (d) Transport layer
- (5) Another name for a VPN is \_\_\_\_\_
- (a) tunnel (b) one-time password  
(c) pipeline (d) bypass