JA-103

January-2021

B.C.A., Sem.-V

SEC-301(1) : Software Project Management
(New)

Time : 2 Hours]   **[Max. Marks : 50**

Instructions :   (1)   **All** Questions in Section – I carry equal marks.

                 (2)   Attempt any **two** questions in Section – I.

                 (3)   Question – V in Section II is compulsory.

Section – I

1.   (A)   Explain step-4 (identify project products and activities) of project planning in detail.   **10**

      (B)   Explain difference between software projects and other types of project along with activities covered by software project management.   **10**

2.   (A)   Explain eight core Atern principles.   **10**

      (B)   Explain software prototyping.   **10**

3.   (A)   Construct a network diagram for following. Find critical path and total project duration.   **10**

Activity	Preceding Activity	Duration (Week)
A	–	10
B	–	14
C	A	8
D	A	7
E	B	5
F	B	10
G	C	9
H	D, E	11
I	G, H	5

      (B)   Explain method of identifying risk.   **10**

4.   (A)   Explain nature of resources.   **10**

      (B)   Explain visualizing progress (gantt chart and slip chart).   **10**

Section – II

5. MCQs (Any **five**)   **10**

    (i) _____ is a planned activity.

    (a) Project   (b) Program

    (c) Software   (d) None of these

    (ii) The time between start and end of the activity is called

    (a) Effort   (b) Elapsed time

    (c) Forecast   (d) None of the above

    (iii) SLOC stands for

    (a) Single Lines of Code   (b) Source Lines of Code

    (c) Same Length of Code   (d) Single Length of Code

    (iv) A _____ model can be expanded into v-process model.

    (a) Spiral   (b) Incremental

    (c) Waterfall   (d) None of these

    (v) PFD stands for

    (a) Project Flow Diagram   (b) Product Flow Diagram

    (c) Program Flow Diagram   (d) Path Flow Diagram

    (vi) The difference between earliest start date and latest start date of an activity is called

    (a) Float   (b) Free Float

    (c) Interfering Float   (d) None of above

    (vii) Schedule variance SV = _____

    (a) EV-AC   (b) EV/AC

    (c) EV/PV   (d) EV-PV

    (viii) An off-the-shelf package is also known as

    (a) Shrink-wrapped   (b) COTS

    (c) Bespoke   (d) None of these

    (ix) _____ is a secondary resource.

    (a) Money   (b) Space

    (c) Time   (d) Labour

    (x) An uncertain event or condition that has positive or negative effect on a project is called

    (a) Cause   (b) Effort

    (c) Effect   (d) Risk

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B.C.A., Sem.-V

SEC-301(1) : Software Project Management
(Old)

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Instructions : (1) **All** Questions in Section – I carry equal marks.
                 (2) Attempt any **two** questions in Section – I.
                 (3) Question – V in Section II is compulsory.

Section – I

1. (A) What is stakeholder ? List and explain types of stakeholders.   **10**

    (B) Explain difference between software projects and other types of project along with activities covered by software project management.   **10**

2. (A) Write a brief note on Incremental delivery.   **10**

    (B) Explain problems with over and under estimates.   **10**

3. (A) Describe the rules for formulating a network diagram.   **10**

    (B) Explain category of risk.   **10**

4. (A) What is earned value analysis ? List and explain method of it.   **10**

    (B) Explain software quality.   **10**

Section – II

5. MCQs : (Any **five**)   **10**

   (i) _____ is a planned activity.
      (a) Project   (b) Program
      (c) Software   (d) None of these

   (ii) Some products are handed over to the clients at the end of project are called
      (a) Project   (b) Program
      (c) Deliverables   (d) None of these

(iii) An uncertain event or condition that has positive or negative effect on a project is called

    (a) Cause   (b) Effort

    (c) Effect   (d) Risk

(iv) Effort = _____ * _____

    (a) Productivity, constant   (c) System size, productivity rate

    (b) Size, constant   (d) Constant, effort

(v) PFD stands for

    (a) Project Flow Diagram   (b) Product Flow Diagram

    (c) Program Flow Diagram   (d) Path Flow Diagram

(vi) Each loop of spiral is called

    (a) Stage   (b) Phase

    (c) Circle   (d) Loop

(vii) Schedule variance SV = _____

    (a) EV-AC   (b) EV/AC

    (c) EV/PV   (d) EV-PV

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    (a) Shrink-wrapped   (b) COTS

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(ix) _____ is a secondary resource.

    (a) Money   (b) Space

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    (c) Same Length of Code   (d) Single Length of Code

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JA-103

January-2021

B.C.A., Sem.-V (CBCS)

SEC-301(B) : Information Security
(New)

Time : 2 Hours]   **[Max. Marks : 50**

Instructions : (1)   **All** Questions in Section – I carry equal marks.

              (2)   Attempt any **two** questions in Section – I.

              (3)   Question – V in Section II is compulsory.

Section – I

1. (A)   Explain Information Security Principles of Success in detail.   **10**

     (B)   Discuss : Patent law, Trademarks and Trade secrets.   **10**

2. (A)   Discuss the administrative and physical controls for providing physical security in detail.   **10**

     (B)   Discuss Operations Security Principles and Operations security process controls.   **10**

3. (A)   Discuss the following authentication techniques : Biometrics, Single Sign-On and Kerberos.   **10**

     (B)   Discuss : The different implementations of PPK Cryptography.   **10**

4. (A)   Discuss : The different types of Data Networks.   **10**

     (B)   Write a detailed note on Malware and Antivirus Software.   **10**

Section – II

5.   Answer any **5** :   **10**

     (1)   The CIA triad is often represented by a _____.

          (a)   Triangle   (b)   Diagonal

          (c)   Ellipse   (d)   Circle

(2) Environmental controls of physical security include

(a) Heating and air conditioning

(b) Diesel backup generators

(c) Barometers

(d) Both (a) and (c)

(3) _____ 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

(4) _____ is a method to magnetically erase data from magnetic media.

(a) Sanitizing   (b) Destruction

(c) Overwriting   (d) Degaussing

(5) Which access control model is also called non-discretionary access control ?

(a) Role-based access control

(b) Mandatory access control

(c) Rule based access control

(d) Label based access control

(6) _____ is the substitution cipher that shifts the alphabet by 13 places.

(a) Ploygraphic cipher   (b) Polyalphabetic cipher

(c) ROT13 cipher   (d) None of the above

(7) When you use the same key to both encrypt and decrypt a message, it is called _____ cryptography.

(a) Asymmetric key   (b) Symmetric key

(c) Public private key   (d) None of above

(8) Which of the following is a risk with distributed system ?

(a) Software Agents   (b) ActiveX controls

(c) Java Applets   (d) All of the above

(9) Which OSI layer defines how to address the physical device on the network ?

(a) Application layer   (b) Presentation layer

(c) Data link layer   (d) Network layer

(10) Another name for VPN is _____.

(a) One time password   (b) pipeline

(c) tunnel   (d) bypass

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JA-103

January-2021

B.C.A., Sem.-V

SEC-301(C) : Mobile Application Development
(New)

Time : 2 Hours]   **[Max. Marks : 50**

Instructions : (1) **All** Questions in Section – I carry equal marks.

(2) Attempt any **two** questions in Section – I.

(3) Question – V in Section II is compulsory.

Section – I

1. (A) Explain Activity Life Cycle in detail.   **10**

   (B) Explain android architecture and describe Context and Intent.   **10**

2. (A) Explain working with permissions in manifest file and registering activity with manifest file.   **10**

   (B) Explain creation and usage of String, Colour, Dimensions xml file.   **10**

3. (A) Explain creation and usage of TextView, Spinner, Buttons, Progressbar and Seekbar.   **10**

   (B) Explain viewgroup and builtin layouts. Explain LinearLayout, RelativeLayout, TableLayout, GridLayout in detail.   **10**

4. (A) Explain array adapter and cursor adapter in detail and its usage in listactivity.   **10**

   (B) Explain types of dialogs and fragment life cycle.   **10**

Section – II

5. MCQs (Any 5 × 2 marks each)   **10**

   (i) If user presses a back button, activity goes in _____ state.

   (a) paused   (b) destroy

   (c) stop   (d) None of these

(ii) _____ programming languages are used for android programming.

    (a) Java   (b) Kotlin

    (c) Python   (d) Both (a) and (b)

(iii) _____ is a non-reusable self-contained portions of a user interface.

    (a) Fragment   (b) Scenario

    (c) Group   (d) All of these

(iv) _____ virtual machine is used in android.

    (a) Python   (b) Linux

    (c) Dalvik   (d) All the above

(v) A _____ is a good choice when using data from a database.

    (a) Arrayadapter   (b) Cursoradapter

    (c) Both (a) and (b)   (d) None

(vi) ListView and GridView are subclasses of _____.

    (a) Adapterview   (b) Cursorview

    (c) Arrayview   (d) None of these

(vii) The _____ is the base class for layouts and views containers.

    (a) Adapterview   (b) Viewgroup

    (c) Absoluteview   (d) Webview

(viii) OHA stands for

    (a) Open Handset Alliance

    (b) Open Hardware Affiliation

    (c) Opensource Headset Alliance

    (d) Opensource Hardware Affiliation

(ix) Which of the followings are not the part of android activity life-cycle ?

    (a) onExit   (b) onCreate

    (c) onResume   (d) onStart

(x) Progressbar dialog box displays _____.

    (a) progress wheel   (b) progress bar

    (c) both (a) and (b)   (d) none

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JA-103

January-2021

B.C.A., Sem.-V

SEC-301(2) : Advanced Java
(Old)

Time : 2 Hours]   **[Max. Marks : 50**

Instructions : (1)   **All** Questions in Section – I carry equal marks.

                (2)   Attempt any **two** questions in Section – I.

                (3)   Question – V in Section II is compulsory.

Section – I

1.   (A)   Write use of RandomAccessFile class. How data can be written and read randomly ? Explain with its important methods.   **10**

    (B)   Explain importance of File class. Write constructors and any five methods of File class.   **10**

2.   (A)   Write JLable class hierarchy, constructors and any four methods.   **10**

    (B)   Write difference between JApplet and JFrame. Explain JFrame class in depth.   **10**

3.   (A)   Write importance of Layout manager. Explain flow layout in depth.   **10**

    (B)   Explain DatagramSocket class and DatagramPacket class in depth.   **10**

4.   (A)   List different types of drivers. Explain any two in depth.   **10**

    (B)   Explain database connectivity steps.   **10**

Section – II

5.   Attempt following : (Any **five**)   **10**

(1)   Write formatted file data _____ class is used.

(a)   DatalnputStream

(b)   DataOutputStream

(c)   Any of the above

(d)   None of the above

(2)   A memory location that is used to temporarily hold data is _____.

(a)   Stream   (b)   Buffer

(c)   Channel   (d)   None of the above

(3)   _____ is the process of recreating an object in memory after retrieved from file.

(a)   Serialization   (b)   Deserialization

(c)   None of the above   (d)   Any of the above

(4)   _____ layout generate a stack.

(a)   Border   (b)   Flow

(c)   Grid   (d)   Card

(5)   Border layout divide the screen in _____ region.

(a)   five   (b)   four

(c)   three   (d)   any number of

(6)   Click a button generates _____.

(a)   ActionEvent   (b)   ItemEvent

(c)   TextEvent   (d)   ButtonEvent

(7)   JPanel is a _____

(a)   Component   (b)   Container

(c)   Both of the above   (d)   None of the above

(8)   _____ component combines two features: a display area, showing an option and a list box containing additional options.

(a)   CheckBox   (b)   JPanel

(c)   JComboBox   (d)   JScrollPanes

(9)   In the TCP/IP socket program, the _____ class act as a server.

    (a)   Socket   (b)   ServerSocket

    (c)   InetAddress   (d)   URLs

(10) The _____ package is used for Java Database Connectivity.

    (a)   Java.lang   (b)   Java.sql

    (c)   Java.net   (d)   Java.io

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