

Seat No. : _____

NL-104

November-2013

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

SEC-301(1) : Software Project Management

Time : 3 Hours]

[Max. Marks : 70

1. (a) Which are the activities covered by SPM ? List out all and explain it in detail. **6**

OR

What is Programme ? Explain Infrastructure Programme in detail.

- (b) Define Stakeholder. Which are the categories of Stakeholders ? And explain in brief. **4**

OR

Explain Product Flow Diagram.

- (c) Give differences between Software Project and other types of Project. **4**

OR

Explain Cash Flow Forecasting.

2. (a) Explain eight core Atern/DSDM principles. **6**

OR

Explain Albrecht Function Point Analysis.

- (b) The project A has 9 inputs and 15 outputs. The new project B has 12 inputs and 14 outputs. Find out Euclidean distance. **4**

OR

Define Prototype. Which are the different types of Prototype ? Explain in brief.

- (c) Explain Waterfall Model. **4**

OR

Explain Expert Judgement Technique.

3. (a) Draw the Activity on Node network diagram for the following problem. Find out Critical Path and Total Duration. **6**

Activity	Preceding Activities	Duration (days)
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

OR

Explain labelling conventions of Activity on Arrow network.

- (b) Explain Sociotechnical model of risk. 4
- OR**
- Explain brainstorming in risk identification.
- (c) Explain Risk Planning. 4
- OR**
- Define Total Float and Free Float.
4. (a) List out categories of resources and explain in brief. 6
- OR**
- List out types of contracts and explain anyone in brief.
- (b) Write a short note on slip chart. 4
- OR**
- Define 0/100 technique, milestone technique.
- (c) Define Open tendering process and Restricted tendering process. 4
- OR**
- Define Staff Costs and Overheads.
5. Answer the followings : 14
- (1) _____ system is created specifically for one customer ?
- (a) Off-the-shelf (b) Customized-off-the-shelf
- (c) Bespoke (d) None of above
- (2) $CV = \text{_____} - \text{_____}$
- (a) EV, AC (b) AC, EV
- (c) PV, EV (d) EV, PV
- (3) _____ is a method of recording and displaying the way in which targets have changed throughout the duration of the project.
- (a) Percentage (b) Timeline Chart
- (c) Gantt Chart (d) 50/50
- (4) The probability that a system will not be available at the time required or the probability that a transaction will fail is called _____.
- (a) Availability (b) Mean time between failure
- (c) Failure on demand (d) Support Activity
- (5) Full form of MoA.
- (6) PERT stands for _____.
- (7) What is a Project ?
- (8) Define Dangles.
- (9) Define Hammock Activity.
- (10) Write down Parkison's Law.
- (11) A project is a planned activity (True or False)
- (12) Define Surrogate.
- (13) Risk Exposure = _____ * _____.
- (14) Waterfall Model can be expanded into the _____ model.
- (a) V-process (b) Incremental
- (c) Spiral (d) None of above
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SEC-301(2) : Advanced Java

1. (a) Solve the following questions : (any **five**) **10**
- (1) What is Swing Frame ? What is its class hierarchy ? Name any five methods of Swing Frame.
 - (2) Draw graphical symbols for following swing components :
 - (a) JCheckBox
 - (b) JPasswordField
 - (c) JComboBox
 - (d) JTextArea
 - (3) Answer the following blanks :
 - (a) The type of Java component that holds other components is a member or child class of the _____ class.
 - (i) Component (ii) Object
 - (iii) Container (iv) String
 - (b) When user closes a JFrame, the default behaviour is for _____.
 - (i) The JFrame to close and the application to keep running
 - (ii) The JFrame to become hidden and the application to keep running
 - (iii) The JFrame to close and the application to exit
 - (iv) Nothing to happen
 - (4) What is Event Listener ? Name any three listeners with their respective methods.
 - (5) Explain class with example : JCheckBoxGroup.
 - (6) Write Java Program to create user defined swing frame with appropriate size, title and location.
 - (7) Differentiate between JApplet and JFrame.
- (b) Solve the following program : (any **one**) **4**
- (1) Write Java swing program that contains a JButton on the top of the JFrame and JLabel on the south of the JFrame. On each button click label should display appropriate message.
 - (2) Write Java swing program that contains three JButton in the center of the JFrame. Texts on the buttons are RED, GREEN and BLUE. On each button click frame should change its background.

2. (a) Answer the following questions : (any **five**)

10

- (1) Explain Border Layout with figure.
- (2) Fill in the following blanks :
 - (a) The KeyEvent method getKeyChar () returns _____ data type.
 - (b) You can use the _____ class to arrange components in a row and column of the container.
- (3) State true or false only :
 - (a) JFrame contains flow layout by default.
 - (b) The method mouseMoved (MouseEvent me) is member of MouseListener interface.
- (4) Differentiate between CardLayout and GridLayout.
- (5) Explain following methods in brief :
 - (a) setLayout (LayoutManger mgr)
 - (b) setHorizontalGap (int pix)
 - (c) getX ()
 - (d) getActionCommand ()
- (6) Define the terms : ItemListener and WindowAdapter.
- (7) Answer the following blanks :
 - (a) AWTEvent is the child class of _____.
 - (i) EventObject
 - (ii) ItemEvent
 - (iii) ComponentEvent
 - (iv) Event
 - (b) Event listeners are _____.
 - (i) Abstract classes
 - (ii) Concrete classes
 - (iii) Interfaces
 - (iv) Enumerations

(b) Solve the following program : (any **one**)

4

- (1) Write Java swing program that design simple login form as shown in figure 1.

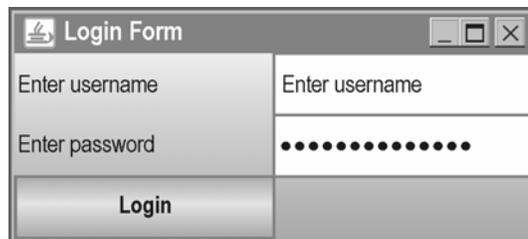


Figure – 1

- (2) Write Java swing program that design a simple form as shown in figure 2.



Figure – 2

3. (a) Solve the following questions : (any **five**) **10**
- (1) Name any five function names of java.io.File class.
 - (2) Differentiate between byte oriented and char oriented streams.
 - (3) What is random access file ? How can it use ?
 - (4) What is Serialization ? Explain with simple example.
 - (5) Answer the following blanks :
 - (i) The file method canWrite() returns a(n) _____.
 - (a) int
 - (b) boolean
 - (c) void
 - (d) object
 - (ii) When you catch an EOFException, it means you have _____.
 - (a) failed to find end of the file
 - (b) forgotten to open the file
 - (c) forgotten to close the file
 - (d) file not found on the disk
 - (6) Define DataInputStream and DataOutputStream classes.
 - (7) Explain following methods in brief :
 - (a) seek (long bytes)
 - (b) available ()
 - (c) readLine ()
 - (d) writeInt (int v)

- (b) Solve the following program : (any **one**) **4**
- (1) Write Java program to read content of one text file and write the same content in upper case in another file.
 - (2) Write Java program to find occurrences of word “that” in user given text file.
4. (a) Solve the following questions : (any **five**) **10**
- (1) What is URL ? Why we need ?
 - (2) Differentiate between Socket and ServerSocket classes.
 - (3) Differentiate between TCP and UDP.
 - (4) Explain classes DatagramSocket and DatagramPacket.
 - (5) The _____ package is used for network socket programming.
 - (a) java.lang
 - (b) java.net
 - (c) java.io
 - (d) java.sql
 - (6) For accessing the resources on the internet, _____ class is used.
 - (a) ServerSocket
 - (b) DatagramSocket
 - (c) URL
 - (d) DatabaseManager
- (b) Solve the following program :(any **one**) **4**
- (1) Write Java program to create TCP/IP socket in which the client sends the text messages and the server displays it on console screen. Connection between client and server program ends if client entered “QUIT” message.
 - (2) Write Java program to create UDP socket in which client can send two numbers and server would find addition of those two numbers.
5. (a) Write short note on followings : (any **two**) **10**
- (1) Classes and interfaces of java.sql package.
 - (2) JDBC Driver types
 - (3) Statement and PreparedStatement

(b) Solve the following program : (any **one**)

4

- (1) Write Java program to establish database connection to MS ACCESS. Program should retrieve data from EMPLOYEE (eid, ename, salary, deptno) table.
 - (2) Write Java program to establish database connection to MS ACCESS. Program accepts command line arguments to insert one record into CUSTOMER (cust_id, cname, city, phone) table.
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