

Seat No. : _____

NG-102

November-2018

B.C.A., Sem.-V

SEC-301(1) : Software Project Management

Time : 2:30 Hours]

[Max. Marks : 70

1. (A) Answer the following :

- (1) Explain activities covered by Software Project Management along with SDLC. 7
- (2) What is stakeholder ? List and explain types of stakeholders. 7

OR

- (1) Explain Step-1 (Identify Project scope and objectives) of project planning in detail. 7
- (2) Write a note on Cost-Benefit analysis and Cash flow forecasting. 7

(B) Attempt any **four** : 4

- (1) _____ is a planned activity.
 - (a) Project (c) Software
 - (b) Program (d) None of these
- (2) SDLC stands for _____.
 - (a) Software Development Life Cycle
 - (b) Structure Development Life Cycle
 - (c) Software Design Life Cycle
 - (d) Structure Design Life Cycle
- (3) Forecast of inflation rates tends to be _____.
 - (a) Certain (c) (a) and (b)
 - (b) Uncertain (d) None of above
- (4) _____ cost includes staff costs.
 - (a) Setup cost (c) Operational cost
 - (b) Development cost (d) Common cost

(5) Some products are handed over to the clients at the end of project are called _____.

- (a) Product
- (b) Program
- (c) Deliverables
- (d) All of above

(6) PFD stands for _____.

- (a) Project Flow Diagram
- (b) Program Flow Diagram
- (c) Product Flow Diagram
- (d) Project Flow Design

2. (A) Answer the following.

- (1) List and explain eight core Atern principles. 7
- (2) Explain various software effort estimation techniques. 7

OR

- (1) Write a brief note on Waterfall model. 7
- (2) What is “Estimating by Analogy” ? Find Euclidean Distance for the following : 7

| Module | Input | Output |
|--------|-------|--------|
| A | 9 | 15 |
| B | 10 | 14 |

New module C requires 8 inputs and 12 outputs. Which of module A or B is the closest analogy in terms of Euclidean Distance ?

(B) Attempt any **four** : 4

- (1) Waterfall model can be expanded into _____.
 - (a) W-Process model
 - (b) Spiral model
 - (c) Incremental model
 - (d) V-Process model
- (2) Each loop of spiral is called _____.
 - (a) Stage
 - (b) Circle
 - (c) Phase
 - (d) loop
- (3) Later increments might require modifications to earlier increment. This is called _____.
 - (a) Software Breakage
 - (b) Gold Plating
 - (c) Time-Boxing
 - (d) None of these
- (4) DSDM stands for _____.
 - (a) Dynamic System Development Method
 - (b) Design System Development Method
 - (c) Dynamic Structure Development Method
 - (d) None of these

- (5) Effort = ____ * ____
- Productivity, constant
 - System size, Productivity Rate
 - Size, constant
 - Constant, effort
- (6) KLOC stands for _____
- Kilo Lines of Code
 - Thousand Lines of Code
 - Knowledge Length of Code
 - None of these

3. (A) Answer the following :

7

- (1) Construct a network diagram for following. Find critical path and total project duration.

| 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 |

- (2) Explain risk planning in detail.

7

OR

- (1) Describe the rules for formulating a network diagram.
- (2) What is risk ? Describe categories of risk.

7

7

(B) Attempt any **three** :

3

- (1) In a network diagram, time moves from ____.
- Right to Left
 - Left to Right
 - Top to Bottom
 - Bottom to Top
- (2) PERT stands for ____.
- Programme Evaluation & Review Technique
 - Project Evaluation & Review Technique
 - Programme Examination & Review Technique
 - Project Examination & Review Technique

- (3) The difference between total float and free float is called _____.
 (a) Float (c) Interfering Float
 (b) Free Float (d) None of above
- (4) An uncertain event or condition that has positive or negative effect on a project is called _____.
 (a) Cause (c) Effort
 (b) Effect (d) Risk
- (5) Risk Exposure = _____ * _____.
 (a) EV, AC
 (b) Size, Effort
 (c) Cause, Effect
 (d) Potential damage, Probability of occurrence

4. (A) Answer the following :

- (1) Explain nature of resources. 7
 (2) What is earned value analysis ? List and explain methods of it. 7

OR

- (1) Write a note on Fixed Price Contract in detail. 7
 (2) List methods of Visualizing Progress. Explain any two in detail. 7

(B) Attempt any **three** : **3**

- (1) _____ is a secondary resource.
 (a) Money (c) Space
 (b) Time (d) Labour
- (2) A very jagged slip lines indicates need for _____.
 (a) Today cursor (c) Implementation
 (b) Rescheduling (d) None of these
- (3) SPI = _____.
 (a) EV-AC (c) EV/PV
 (b) EV/AC (d) EV-PV
- (4) _____ system is created for specifically one customer.
 (a) Off-the-shelf (c) Bespoke
 (b) COTS (d) None of these
- (5) The total service time divide by the number of failure is called _____.
 (a) Availability (c) Failure on demand
 (b) Support Activity (d) Mean time between failures

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NG-102

November-2018

B.C.A., Sem.-V

SEC-301(2) : Advanced Java

Time : 2:30 Hours]

[Max. Marks : 70

1. (A) Answer the following :

- (1) Write use of File class and explain File class with its constructors and methods. 7
- (2) How objects can be written in file ? Explain. 7

OR

- (1) Which class is used to read records randomly from the file ? Explain with its methods. 7
- (2) Explain FileOutputStream class in depth. 7

(B) Answer the following : (Any **four**) 4

- (1) Random access file are also known as _____.
 - (a) Data access file
 - (b) Instance access file
 - (c) Both of the above
 - (d) None of the above
- (2) Serialization means _____.
 - (a) Object to byte stream conversion
 - (b) Byte to object stream conversion
 - (c) Both of the above
 - (d) None of the above
- (3) A memory location that is used to temporarily hold data is a _____.
 - (a) Stream
 - (b) Buffer
 - (c) Bulkware
 - (d) Channel
- (4) The _____ package contains all the classes you use in file processing.
 - (a) Java.file
 - (b) Java.io
 - (c) Java.lang
 - (d) Java.net
- (5) A _____ is collection of fields that contain data about an entity.
 - (a) Record
 - (b) Data
 - (c) File
 - (d) None of the above
- (6) FileInputStream class is provide capability to _____ disk file.
 - (a) Read
 - (b) Write
 - (c) Read and write
 - (d) Delete

2. (A) Answer the following :

- (1) What is container ? Write name of different containers. Explain any two containers in depth. 7
- (2) Explain JLabel and JCheckBox in depth. 7

OR

- (1) Write difference between JFrame and JApplet. How can we add and remove components in JApplet ? Explain any two additional applet methods. 7
- (2) Explain JButton and JComboBox. 7

(B) Answer the following : (Any **four**) 4

- (1) JPanel is a _____.
 - (a) Component that holds other components
 - (b) Swing component
 - (c) Container
 - (d) All of the above
- (2) The container class derived from _____.
 - (a) Component
 - (b) Window
 - (c) Panel
 - (d) None of the above
- (3) _____ method use to set number of columns in JTextField.
 - (a) setColumns()
 - (b) setLines()
 - (c) Any of the above
 - (d) None of the above
- (4) JScrollPane jp =new JScrollPane();
In ap scroll bars appear _____.
 - (a) Horizontally
 - (b) Both horizontally and vertically
 - (c) Only if needed to display the contents
 - (d) Always
- (5) _____ method returns current state of JCheckBox.
 - (a) isSelected()
 - (b) isStatus()
 - (c) Any of the above
 - (d) None of the above
- (6) A class that respond to button clicks must implement a(n) _____.
 - (a) ButtonListener
 - (b) ItemListener
 - (c) ClickListener
 - (d) ActionListener

3. (A) Answer the following :

- (1) What is use of Layout Manager ? Explain GridLayout in depth. 7
- (2) Differentiate TCP and UDP protocols and explain ServerSocket class in depth. 7

OR

- (1) Write overview of java.net package and explain InetAddress class in depth. 7
- (2) Explain event driven programming and define terms : Event, Listeners and Handlers. 7

(B) Answer the following : (Any **three**) 3

- (1) Handlers are _____.
 - (a) Methods (b) Classes
 - (c) Interface (d) None of the above
- (2) Button click generates _____ event.
 - (a) Click (b) Action
 - (c) Any of the above (d) None of the above
- (3) _____ layout is used to arrange the components in stack.
 - (a) Flow (b) Border
 - (c) Grid (d) Card
- (4) _____ package is used in networking applications.
 - (a) Java.net (b) Java.networking
 - (c) Java.socket (d) None of the above
- (5) _____ class is used to access the resources on the internet using web.
 - (a) URL (b) URLServer
 - (c) Socket (d) DatagramSocket

4. (A) Answer the following :

- (1) Write steps for JDBC connection. 7
- (2) Explain getConnection and createStatement methods with their use and prototype. 7

OR

- (1) Write different types of drivers for JDBC. Explain any two in depth. 7
- (2) Write Java steps to insert data into Employee (id, name) table. 7

(B) Answer the following : (Any **three**)

3

- (1) For loading the JDBC-ODBC driver _____ method is used.
 - (a) forName()
 - (b) loadDriver()
 - (c) getConnection()
 - (d) None of the above
- (2) _____ method creates the Statement object for sending query to the database.
 - (a) createStatement()
 - (b) sendQuery()
 - (c) execute()
 - (d) None of the above
- (3) For getting a database result, the _____ object is required.
 - (a) Statement
 - (b) ResultSet
 - (c) Connection
 - (d) Query
- (4) The _____ package is used for data Java Database Connectivity.
 - (a) Java.database
 - (b) Java.db
 - (c) Java.sql
 - (d) Java.io
- (5) ODBC stands for_____.
 - (a) Open database connection
 - (b) Object database connection
 - (c) Object data connection
 - (d) Open database connectivity
