UNIVERSITY OF THE PUNJAB

Fourth Semester 2012
Examination: B.S. 4 Years Programme

Roll No. ----------

PAPER: Software Engineering **TIME ALLOWED: 2 hrs. & 30 mins.**
Course Code: IT-22406 **MAX. MARKS: 60**

Attempt This Paper on Separate Answer Sheet provided.

Short Question (Marks 30)

Each question is of 5 marks

Q3: Answer the following short questions.

Question # 1:

Differentiate "Software Engineering" and "Software Process" with an example?

Question # 2:

Why does the value of "Complexity Adjustment Factor (∑Fi)" not exceed from 70 in Function Point Analysis?

Question # 3:

What is the main objective to conduct "Critical Path Method Analysis" while scheduling a project?

Question # 4:

Differentiate "Entity" and "Entity Instance" with an example?

Question # 5:

Differentiate "Coupling" and "Cohesion" with an example?

Question # 6:

Write down the formulas to calculate "Cyclometic Complexity".

Subjective Questions (Marks 30)

Question#1:

Draw context level and level 1 DFD for following case study?

Case Study:

It has been a tradition or trend that everyone is very conscious about his or her hair style. There are very few people around you who will be completely satisfied about his or her hair style. So now you are going to create a very good satisfaction level in this regard. The main theme of idea is that now every person can choose a hair style by seeing himself or herself on screen with different hairstyle and he or she will select according to his or her choice. Main processes in this application are as under:

Whenever a customer will come for changing hairstyle, he or she will be shown different hair style by taking his or her picture and integrating those hairstyles with his or her personality. The customer will select hairstyle according to his choice. Issues which need to be catered are:

1. There must be a data store of hair style of each type.
2. There must be price for each hair style.
3. Approximately time should be shown to customer for making new hair style.

After having that hair style, customer will have the facility to match his or her new hairstyle with selected hairstyle to achieve maximum customer satisfaction. Customer will make payment and after that he or she will enjoy new hairstyle.

Note: if you feel any confusion, do not hesitate to take assumption. But remember, assumption should not violate business logic.

Question #2:

Explain the method in details to calculate project cost by using CoCoMo?

Question #3:

Differentiate Software Testing and Software Debugging? Explain at least two techniques of Software Debugging with examples?

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Fourth Semester 2013
Examination: B.S. 4 Years Programme

Roll No. ----------

PAPER: Software Engineering **TIME ALLOWED: 2 hrs. & 30 mins.**
Course Code: IT-22406/IT-206 **MAX. MARKS: 50**

Attempt This Paper on Separate Answer Sheet provided.

Short Question (Marks 20)

Each question is of 5 marks

Question # 1:

Differentiate "Software Engineering" and "Software Process" with an example?

Question # 2:

Differentiate "function requirements" and "non-function requirements" with examples?

Question # 3:

What is the main objective to conduct "Critical Path Method Analysis" while scheduling a project?

Question # 4:

Differentiate "Coupling" and "Cohesion" with an example?

Question # 5:

Write and explain the formulas to calculate "Cyclometic Complexity".

Subjective Questions (Marks 30)

Question#1:

Draw context level (zero level) and level 1 DFD for a simple calculator having four functions (Addition, Subtraction, Multiplication and Division)? If you take any assumption, write it clearly.

Question #2:

Explain the method in details to calculate project cost by using CoCoMo?

Question #3:

Differentiate Software Testing and Software Debugging? Explain at least two techniques of Software Debugging with examples?

UNIVERSITY OF THE PUNJAB

Fourth Semester 2014
Examination: B.S. 4 Years Programme

Roll No. ----------

PAPER: Software Engineering **TIME ALLOWED: 2 hrs. & 30 mins.**
Course Code: IT-206/IT-22406 **MAX. MARKS: 50**

Attempt This Paper on Separate Answer Sheet provided.

Short Questions (Marks 20)

Each question is of 4 marks

Question # 1:

Define "Software Engineering"?

Question # 2:

Name and explain at least three types of software teams with examples?

Question # 3:

Differentiate "coupling and cohesion" with examples?

Question # 4:

Name and explain symbols/elements/constructs of State Transition Diagram?

Question # 5:

What are three golden rules of "user interface design"? Explain with examples?

Subjective Questions (Marks 30)

Each question is of 10 marks

Question # 1:

Draw context level and level DFD for following case study:

Case Study:

In a string conversion system, a user will give string/s. String/s will be validated,
If string is not validate, user will again insert a string. Then user will insert an operator from following:

1. Reverse String
2. Count Character string
3. Concatenation of two strings

After that system will perform desired function and result will be shown to user.

Note: if you feel any confusion, do not hesitate to take assumption. But remember, assumption should not violate business logic.

Question # 2:

Explain the method in details to calculate project's size, project's cost, and project effort by using "Line of code" based estimation technique?

Question # 3:

Differentiate "Black box testing" and "White box testing" with examples?

UNIVERSITY OF THE PUNJAB

Roll No. .....

Fourth Semester 2015
Examination: B.S. 4 Years Programme

PAPER: Software Engineering | **TIME ALLOWED: 30 mins.**
Course Code: IT-206 / | **MAX. MARKS: 10**

Attempt this Paper on this Question Sheet only.

Objective Type Questions (Total Marks 10)

Choose the right option:

1. Waterfall model is not suitable for?
   a. Small Projects
   b. Complex Projects
   c. Accommodating changes
   d. None of the above

2. Software Engineering aims at developing?
   a. Reliable software
   b. Cost effective software
   c. Both 'a' and 'b'
   d. None of the above

3. White box testing, a software testing technique is sometimes called?
   a. Basic path
   b. Graph testing
   c. Loop testing
   d. Glass box testing

4. Black box testing, a software testing technique is sometimes called?
   a. Data flow testing
   b. Loop testing
   c. Behavioral Testing
   d. Graph based testing

5. In object oriented design of software, objects have?
   a. Attributes and names only
   b. Operations and names only
   c. Attributes, name, and operations
   d. None of the above

6. Which of the following is a tool in design phase?
   a. Abstraction
   b. Refinement
   c. Information hiding
   d. There is no such activity

7. Which one of the following is not type of maintenance?
   a. Correction
   b. Adaptation
   c. Enhancement
   d. testing

8. Which type of requirements is generally stated by customer?
   a. Non Functional Requirements
   b. Functional Requirements
   c. Both 'a' and 'b'
   d. None of the above

9. In data flow diagram, it is possible that a process has an input but there is no output.
   a. True
   b. False

10. For architectural design, main input comes from?
    a. Entity Relationship Diagram
    b. State Transition Diagram
    c. Data Flow Diagram
    d. All of the above

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Fourth Semester 2015
Examination: B.S. 4 Years Programme

Roll No. .....

PAPER: Software Engineering | **TIME ALLOWED: 2 hrs. & 30 mins.**
Course Code: IT-206 / | **MAX. MARKS: 50**

Attempt this Paper on Separate Answer Sheet provided.

Short Questions (Marks 20)

Each question is of 4 marks

Question # 1:
"Software does not wear out but it can deteriorate". Explain with example?

Question # 2:
Why does "Line of code based estimation" heavily dependent on historical data?

Question # 3:
Explain "requirement validation" with respect to "requirement engineering" by taking relevant example?

Question # 4:
Differentiate "Event" and "action" with respect to "state transition diagram"?

Question # 5:
Define "Software Quality Assurance"?

Subjective Questions (Marks 30)

Each question is of 10 marks

Question # 1:
Write down the procedure to draw a complete "Data Flow Diagram" by taking an example?

Question # 2:
Explain cohesion and coupling by taking relevant examples?

Question # 3:
Explain "user interface design" process by taking relevant example?

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Fourth Semester 2016
Examination: B.S. 4 Years Programme

Roll No. .....

PAPER: Software Engineering
Course Code: IT-206 / IT-22406

TIME ALLOWED: 2 hrs. & 30 mins.
MAX. MARKS: 50

Attempt this Paper on Separate Answer Sheet provided.

Short Questions (Marks 20)

Each question is of 4 marks

Question # 1:
Define "Software Engineering"?

Question # 2:
Differentiate "GANTT chart" and "Critical Path Method Analysis" with an example?

Question # 3:
Differentiate "Quality Control" and "Quality Assurance" with an example?

Question # 4:
Differentiate "Modality" and "Modularity" ?

Question # 5:
Differentiate "Black Box Testing" and "White Box Testing"?

Subjective Questions (Marks 30)

Each question is of 10 marks

Question # 1:
Define "Software Architecture"? Explain the procedure to map requirements to "Software Architecture" by taking relevant example?

Question # 2:
Name and explain elements/constructs/symbols for "Entity Relationship Diagram"?

Question # 3:
Differentiate "Software Testing" and "Software Debugging"? Explain any two techniques of "Software Debugging"?

UNIVERSITY OF THE PUNJAB

Roll No. .....

Fourth Semester - 2017
Examination: B.S. 4 Years Programme

PAPER: Software Engineering | **TIME ALLOWED: 30 mins.**
Course Code: IT-206 / IT-22406 | **MAX. MARKS: 10**

Attempt this Paper on this Question Sheet only.

Objective Type Questions (Total Marks 10)

Choose the right option:

1. Linear Sequential Model is suitable when?
   A. Requirements are clear
   B. Frequent changes are there
   C. Time is less
   D. Resources are short

2. Adaptation of "Software Engineering: As layered technology" is known as:
   A. Software Process
   B. Software Process Model
   C. Software Engineering
   D. Both 'A' and 'B'

3. There is no difference between a project and an operation.
   A. True
   B. False

4. Which one of the following is not a 'P' of Project Management?
   A. People
   B. Process
   C. Power
   D. Project

5. The duration of an activity for which if it is delayed, there will be no effect on deadline is known as:
   A. Free time
   B. Independent time
   C. Slack or Float time
   D. All of the above

6. "A customer has to purchase many items from point of sale system". It is shown by:
   A. Cardinality
   B. Modality
   C. Both A and B
   D. None of the above

7. The main input for architectural design from analysis model is _____.
   A. State Transition Diagram
   B. Data Flow Diagram
   C. Entity Relationship Diagram
   D. All of the above

8. An external entity can interact with a data store directly.
   A. True
   B. False

9. "Program Design Language" is a method to develop _____.
   A. Data Design
   B. Architectural Design
   C. Component Level Design
   D. All of the above

10. Testing is done by destructive approach and development is done by constructive approach.
    A. True
    B. False

UNIVERSITY OF THE PUNJAB

Fourth Semester - 2017
Examination: B.S. 4 Years Programme

Roll No. .....

PAPER: Software Engineering | **TIME ALLOWED: 2 hrs. & 30 mins.**
Course Code: IT-206 / IT-22406 | **MAX. MARKS: 50**

Attempt this Paper on Separate Answer Sheet provided.

Short Questions (Marks 20)

Each question is of 4 marks

Question # 1:
Differentiate "Software Process" and "Software Engineering"?

Question # 2:
Differentiate 'Manager' and 'Leader'?

Question # 3:
Differentiate 'Entity' and "External Entity" with an example?

Question # 4:
Differentiate 'event' and 'action'?

Question # 5:
Differentiate "Exhaustive Testing" and "Selective Testing"?

Subjective Questions (Marks 30)

Each question is of 10 marks

Question # 1:
What do you understand by "Project Scope"? Explain it by taking relevant example?

Question # 2:
Name and explain elements/constructs/symbols for "Flow Chart"?

Question # 3:
Differentiate "White Box Testing" and "Black Box Testing"? Explain at least one technique for each?

End of Question Paper

UNIVERSITY OF THE PUNJAB

Fourth Semester - 2018

Examination: B.S. 4 Years Programme

Roll No. .....

PAPER: Software Engineering **TIME ALLOWED: 15 Mints.**

Course Code: IT-206 / IT-22406 Part – I (Compulsory) **MAX. MARKS: 10**

Attempt this Paper on this Question Sheet only.

Please encircle the correct option. Each MCQ carries 1 Mark. This Paper will be collected back after expiry of time limit mentioned above.

Question #: 1 **(1x10=10)**

1. Linear Sequential Model is suitable when?
   A. Requirements are clear
   B. Frequent changes are there
   C. Time is less
   D. Resources are short

2. Sequence/arrangement of steps to achieve a particular goal is known as:
   A. Software Process
   B. Process
   C. Software Engineering
   D. Both 'A' and 'B'

3. A software must have:
   A. Instructions to do the task
   B. Data structures
   C. Documentations
   D. All of the above

4. "Line of Code" based estimation is heavenly dependent on _____.
   A. Historical Data
   B. Technology
   C. Management Skills
   D. None of above

5. The main objective of "Critical Path Method (CPM) analysis" is _____.
   A. To make project schedule
   B. To identify slack (float) time of project activities
   C. To identify critical path
   D. To allocate resources

6. Which one of the following is not part of "Structured Analysis Model"?
   A. Functional Model
   B. Data Model
   C. Data Design
   D. Behavioral Model

7. Which of the following is not true about component-level design
   A. It enables transformation of design model into operational software
   B. It occurs when data, architectural, and interface designs have been established
   C. It has the high degree of software design abstraction.
   D. It establishes the algorithmic detail required to manipulate data structures

8. Which one of the following shows the identification of data structures in structured design?
   A. Data Design
   B. Architectural Design
   C. User Interface Design
   D. Component Design

9. Which one of the following is not a "golden rule of user interface design"?
   A. "Place the user in control"
   B. "Reduce the user's memory load"
   C. "Make the interface consistent"
   D. None of the above

10. Testing can show the absence and as well as the presence of errors.
    A. True
    B. False

UNIVERSITY OF THE PUNJAB

Fourth Semester - 2018

Examination: B.S. 4 Years Programme

Roll No. .....

PAPER: Software Engineering | **TIME ALLOWED: 2 Hrs. & 45 Mints.**

Course Code: IT-206 / IT-22406 Part – II | **MAX. MARKS: 50**

Attempt this Paper on Separate Answer Sheet provided.

Question #: 2 Short Questions **(4x5=20)**

Each question is of 4 marks

1:
Define 'Software' and "Software Engineering"?

2:
Name the 4 Ps of Project Management?

3:
Explain the unit of 'Effort'?

4:
Define "transactional flow" with respect to "architectural design"?

5:
Differentiate "Black Box Testing" and "White Box Testing"?

Question #: 3 Subjective Questions **(10x3=30)**

Each question is of 10 marks

1:
Why "Data Flow Diagram" is used for "Functional Modeling"? Explain the procedure to draw the diagram?

2:
Define 'Risk'? How "Risk Analysis is conducted"?

3:
Explain the concepts of 'coupling' and 'cohesion' by taking relevant examples?