Institute of Information Technology

Jahangirnagar University

Professional Masters in IT

1st Trimester Special Final Examination, Spring 2019

Duration: 3 Hours | Full Marks: 60

Course Code: PMIT – 6111 | Course Title: Software Testing & Quality Assurance

Do not write anything on the question paper.

There are **7 (Seven)** questions. Answer any **5 (Five)** of them.

Figures in the right margin indicate marks.

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1. a) Write the agile manifesto. — 2
   b) Show the XP release cycle. "XP is fun" – why? — 3+2
   c) Show the process of TDD. Write the role of testers in an agile team. — 3+2
2. a) Write the stages of testing. Explain smoke testing. — 2+2
   b) What do you test during a structure test? Show a model of the software testing process. — 2+3
   d) Why acceptance testing is important? — 3
3. a) Show a testing strategy where you get the maximum testing coverage. — 6
   b) Write difference between: — 3+3
      i. Debugging and testing
      ii. Inspections and testing
4. a) Write an algorithm to find even and odd numbers from a given set of inputs. Design test cases with maximum coverage for it. — 4
   b) Give example of use case based testing. — 4
   c) Give example of BVA and equivalence partition. — 4
5. a) Write the states of defects. — 3
   b) Consider the following table and estimate the function points from it. If 5 FP's can be implemented per month and cost/month is BDT 2,50,000/- then find the time and cost required to total FP's. — 4

Information Domain Value	Count	Weighting Factor (Simple)
External Inputs (EIs)	5	3
External Outputs (EOs)	7	2
External Inquiries (EQs)	3	3
Internal Logical Files (ILFs)	4	7
External Interface Files (EIFs)	3	5

   c) Mention the types of defects. Give examples of different priority of defects. — 2+3
6. a) Explain Quality Conflicts for an online airline ticket booking system. — 4
   b) Write the quality management activities. How quality management and software development relates with each other? — 3+3
   c) Write the quality goals for requirements. — 2
7. a) Show the review process. How review becomes easier for agile methods? — 3+3
   b) Mention some experience-based testing techniques. When it works better? — 2+2
   c) What are the definitions and uses for the program below? — 2

```
i.   read (x, y);
ii.  z = x + 2;
iii. if (z < y)
iv.      w = x + 1;
         else
v.           y = y + 1;
vi.  print (x, y, w, z);
```


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