Reg. No.									

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

VII SEMESTER B.TECH.

(INFORMATION TECHNOLOGY/COMPUTER AND COMMUNICATION ENGINEERING)

END SEMESTER EXAMINATIONS, NOVEMBER 2017

SUBJECT: PROGRAM ELECTIVE V

SOFTWARE PROJECT & QUALITY MANAGEMENT [ICT 4015]

REVISED CREDIT SYSTEM

(25/11/2017)

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer ALL the questions.
- Missing data, if any, may be suitably assumed.

1A. With a neat diagram explain how the extended model of cost of software quality is different from the classic model. 5

1B. Suppose there are 4 users who use the same product to attempt to perform the same task (1 task). 3 users manage to successfully complete it – taking 1, 2 and 3 seconds respectively. The fourth user takes 6 seconds and then gives up without completing the task. Calculate the overall relative efficiency and time based efficiency. 3

1C. Which are the two perspectives in the cost and schedule estimating process that the project plans need to be derived ? 2

2A. For the following C program calculate the given halstead metric:

i. Length of the program
ii. Volume of the program
iii. Difficulty of the program
iv. Effort required to write the program.

```
int squarerootfinder(int number, int divisor){
if(divisor == 1){
return 1;
}
else{
if((number / (divisor * divisor))% 1 != 0){
divisor = squarerootfinder(number, divisor - 1);
}
if((number/ (divisor * divisor)) % 1 == 0 ){
return divisor;
}
}
}
```

5

2B.	What are the requirements of ISO 9001: 2000 standard?	3
2C.	With a suitable example differentiate between process metric and product metric.	2
3A.	What are the steps involved in monitoring and control phase of a software management?	5
3B.	What are the two approaches to determine the Software Quality Assurance?	3
3C.	Define Risk exposure. Find the risk exposure of the process, if the probability of a risk is 10 percent and the impact of the risk is $10,000.	2
4A	Explain the process of risk analysis. Why should the risk be identified?	5
4B.	What are the different conditions required to consider while creating a project schedule?	3
4C.	With suitable reasons give any two disadvantages of using Lines of Code (LOC).	2
5A.	Explain the procedure and steps required for counting function points with a neat diagram.	5
5B.	Describe the activities that takes place in the initiation phase of project life cycle.	3
5C.	Differentiate between verification, validation and testing.	2