Printed Pages: 02 **Subject Code: RCA502**

Paper Id: 214502 **Roll No:** | | | | | | | | | | |

MCA

(SEM V) THEORY EXAMINATION 2018-19

SOFTWARE ENGINEERING

Time: 3 Hours ***Total Marks: 70***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.
2. Any special paper specific instruction.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

a. Define various software characteristics.
b. Compare Data Flow and E-R diagram.
c. State SQA.
d. Write the advantage and disadvantage of function point measurement.
e. What are the two main activities of regression testing?
f. Write any two reasons to increase in the software development cost?
g. List advantages of Reverse Engineering?

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

a. What is Software development life cycle? Discuss the generic waterfall model.
b. What is a flow chart? How is the flow charting techniques useful for software development?
c. What is bottom up design? Discuss its benefits and limitations.
d. Define software testing. Explain various level of testing
e. What are the benefits of using CASE tools? Explain in detail.

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7

(a) Define the term "Software Engineering". Explain the major differences between software engineering and other traditional engineering disciplines.
(b) Discuss different components of the Software Engineering involved in the development process.

4. Attempt any *one* part of the following: 7 x 1 = 7

(a) What do you understand with the term "requirement elicitation"? Discuss any two techniques.
(b) Compare ISO and SEI-CMM model.

5. Attempt any *one* part of the following: 7 x 1 = 7

(a) Write a note on Halstead's Software Science.
(b) What is SRS document and Cyclomatic complexity?

6. Attempt any *one* part of the following: 7 x 1 = 7

(a) Differentiate between validation and verification. Describe Alpha and Beta testing along with their advantages and disadvantages.

(b) What is a formal technical review? What are the objectives offormal technical reviews? Give a comparative study of code inspection, reviews and walk-through.

7. Attempt any *one* part of the following: 7 x 1 = 7

(a) Using a schematic diagram and suitable example show the order in which the following are estimated in the COCOMO estimation technique:
cost, effort, duration, size.

(b) What do you mean by risk management? Explain how to select the best risk reduction technique when there are many ways of reducing a risk.