Ref. No: REFNO018128

MCA –II Semester/B.Sc. VI SEMESTER EXAMINATION 2018-19

Subject: Computer Science/Computer Application

Paper No. CS 205-Software Engineering

Time : Three Hours **Max Marks: 70**

Note: Attempt any **FIVE question** including question number **one** which is compulsory.

1.
   a) Differentiate between software product and program. 2
   b) What is the difference between component and connector view? 2
   c) Distinguish between verification and validation? If the final product confirms to its requirement specification then identify the system should follow the criteria of validation and verification or not. 3
   d) How debugging is different from testing? 2
   e) Define the following term in brief: Software reuse & Software engineering. 4
   f) Explain any three part of SRS document. 3
   g) Differentiate between decision tree and table with suitable example. 3
   h) Why classical waterfall model can consider as an impractical and cannot be used in real project development? Justify. 3

2. a) Define the following terms with respect to program and write an expression for each in term of number of unique operator and unique operands used in a program 6
   i. Estimated length
   ii. Volume
   iii. Program vocabulary
   iv. Potential Minimum Volume
   v. Program level
   vi. Effort

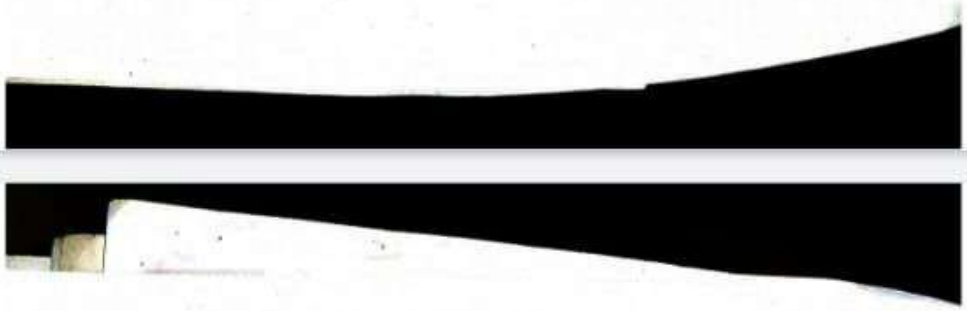
   b)Consider a program 'P' in which 6
   i. The number of unique operator used in the program=11
   ii. The number of unique operands use in the program= 12
   iii. Speed of metal discrimination for program=18

   Then compute all of the above attributes defined on question 2(a) for program P.

3.
   a) What does system availability means? Also define reliability requirements? 4
   b) Which phase of SDLC is considered to be most complex? Give reasons. 4
   c) Write objective of test cases? Also explain different types of testing in software engineering. 4

4.
   a) Differentiate between functional and object oriented design concept. Give example of each of them. 6
   b) Write role and responsibilities of software architecture. 3
   c) What are the different architecture Views? 3

P.T.O.



5.
   a) What is the need of software maintenance? Explain how it can be done? 4
   b) Why software process model is needed? What are the different kinds of software process model? Explain any one software process model in details. 8

6. a) Define cohesion and coupling of module and explain different kind of coupling and cohesion by taking suitable examples. 6
   b) Differentiate between White-box testing and Black-box testing. Explain the various strategies of Black-box testing by taking appropriate example. 4
   c) Define module in program? Explain three reasons in favor of why module independence is key factor for a good software design. 2

7. Write short notes on any **three** of the following: 4x3=12
   a) Process management
   b) Gantt Chart
   c) IEEE Standards
   d) Clean room approach
   e) ER Diagram and DFD

END