MCA (Revised)

Term-End Examination,

December 2019

MCS-035 : SOFTWARE ENGINEERING

Time : 3 Hours]   [Maximum Marks : 100

                                        (Weightage : 75%)

Note : (i) Question No. 1 is **Compulsory**.

(i) Attempt **any three** questions from the rest.

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1. a) You are requested to design a pay-roll application
        for "XYZ Software solution" company. There are
        several employees with various designations
        working for that company. For the above mentioned
        system.

    i)   Prepare SRS document   5

    ii) Design and draw DRD's upto 2-levels with
         conventions.   5

    iii) Design a complete ER-diagram with proper
         conventions.   5

    iv) Construct a structure-chart for this system. 5

    Note: Assumption can be made wherever necessary.

    b) Define Function-point metrics. What are its features
        and briefly explain about them?   8

    c) With reference to change control, explain the
        contents of the following formats.   12

    i)   Software change request format

    ii) Software change report format

    iii) Engineering change order format

2. a) Discuss the configuration management practices for Web-based projects. 10

 b) Define formal method in Software development. Briefly explain the two essential components in the definition. 10

  i) Formal Language
  ii) Formal Method

3. a) Define Global System for Mobile communication (GSM). Also explain the architecture of GSM. How is this different from CDMA? 10

 b) What are the different categories of tools those can be used for testing? Explain the following tools (Mentioning its kind, organization developed, description/use, platform on which it can be used) 10

  i) Rational Test Real Time Unit Testing
  ii) AQ test

4. a) Define Human Computer Interface (HCI). Explain the process of interface design for the software applications. Highlight some of the principles of Good HCI design. 10

 b) Explain COCOMO model with an example. 10
  combiative cost model

5. Write a short notes on **any four** of the following: 4×5=20

 a) Clean room software engineering
 b) Reverse Engineering
 c) Prototyping model
 d) Software Review and concerned activities
 e) Software quality assurance

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