

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.**

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)

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
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

