

END SEMESTER EXAMINATION, JUNE - 2019
MCA THIRD SEMESTER

COURSE CODE: MCA205	COURSE TITLE: SOFTWARE ENGINEERING & PROJECT MANAGEMENT
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[Time allotted: Three hours]**[Max. Marks: 100]***Note: Attempt all Sections*

Section (A)

Q.1. Attempt all questions.**(2 x 10 = 20)**

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| <ul style="list-style-type: none">a. What is a project?b. Give the significance of cost benefit analysis.c. Define the objectives of activity planning.d. List the factors used to identify the risk.e. Mention the characteristics of software projects.f. Define the terms: Process, Activity.g. When is Net Present Value calculated for the project? | <ul style="list-style-type: none">h. What is meant by Software Configuration Item (SCI)?i. List the steps involved in selecting right person for the job.j. What are the characteristics that make Software project different from other projects? |
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Section (B)

Q.2. Attempt any 5 questions.**(7 x 5 = 35)**

- a. What do you mean by the term software reengineering? Why it is required.
- b. Consider a Library Management system with functionalities for inquiries, rentals. Returns, reservations and fee collection. Using COCOMO technique, estimate the effort required for developing the system. State the assumptions made in the estimation.
- c. Draw the diagram of waterfall life cycle and also explain the different phases involved in it.
- d. What are various steps to schedule project task in project planning. Explain each step with the help of diagram.
- e. It has been said that the design cannot be directed by technical experts alone. Do you agree with the statement? Write in detail to support your views. Give various responsibilities of a project manager along with structure of personnel organization.
- f. List and discuss some of the point's specific for identifying the risks during software development. Also give some category of risks that are to be identified.
- g. Discuss about software quality factors and attributes.

Section (C)

Attempt any 3 questions.**= 45)****(15 x 3**

- Q.3.**
 - a. Explain the framework developed by CMM in improving the productivity of a software organization.
 - b. Compare and contrast between ISO 9000 Certification and CMM.
- Q.4.**
 - a. What are the purposes of Data Flow Diagrams, Entity-Relationship Diagrams? Give an example of each.
 - b. List and explain different types of testing done during the testing phase.
- Q.5.**
 - a. Explain the spiral software development life cycle model with a neat sketch of all its components with an illustration. State its strengths and weaknesses. Justify some of the applications where spiral model will be more suitable.
 - b. What is contract in software project management? Explain various types of contracts and also define the stages in contract placement.
- Q.6.**
 - a. Schematically draw the architecture of a CASE environment and explain how different tools are integrated.
 - b. What are the main advantages of using CASE tools? List some of the CASE tools and explain their use.
- Q.7.** Write short notes on: **i. Gantt Charts ii. RAG reporting and iii. SRS**
