

**MCA(3<sup>RD</sup>SEM)EXAMINATION 2021**

**WEB PROGRAMMING ESSENTIALS**

**PAPER CODE: MCA301**

**TIME: 3 HOURS**

**MAX MARKS: 50**

**SECTION A 5X6=30**

**(Each question carries 6 marks)**

**Answer any 5 of the following questions**

- 1) How to create frames in a web page?
- 2) What technologies are used in AJAX?
- 3) Write short notes on data types used in PERL.
- 4) Write a ruby script to perform arithmetic operations by reading two input numbers.
- 5) Explain the way in which a DNS server resolves addresses.
- 6) Write HTML code to display an image.
- 7) Give some advantages of using Cascading Style Sheets. How external style sheet is useful in web page design?  
(2+3)
- 8) State the function of DNS and the protocol used.

**SECTION B 2X10=20**

**(Each question carries 10 marks)**

**Answer any 2 of the following questions**

- 1) Explain different properties and values used in CSS.
- 2) What is HTML? Explain about text formatting tags in HTML with example.
- 3) a Explain about forms in HTML.  
b. Explain about frames in HTML
- 4) What is Data validation? Discuss with example.

**MCA 3<sup>rd</sup> SEM EXAMINATION 2021**  
**SOFTWARE ENGINEERING**  
**PAPER CODE: MCA302**

**TIME: 3 HOURS**

**MAX MARKS: 70**  
**4X7=28**

**SECTION A**

**(Each question carries 7 marks)**

**Answer any 4 of the following questions**

- 1) Explain iterative waterfall model with a neat diagram.
- 2) Explain Spiral model for software lifecycle and discuss various activities in each phase.
- 3) Differentiate between functional and non-functional requirements.
- 4) Define SRS? What are the characteristics of SRS?
- 5) Differentiate between Black box testing and White box testing.
- 6) Define maintenance? Explain the process of maintenance with the help of diagram.

**SECTION B**

**3X14=42**

**(Each question carries 14 marks)**

**Answer any 3 of the following questions**

- 1) Explain in detail the difference between CMM and ISO. What is risk? What are the various types of risk?
- 2) With the help of diagram explain Prototype Model. Write the weakness and strength of Prototype Model. Suppose that a project was estimated to be 400 KLOC. Calculate the effort and development time for each of the three nodes i.e. organic, semidetached and embedded.
- 3) Explain the various types of coupling. What is cohesion? Explain the various types of cohesion.
- 4) What is the main difference between computer program and computer software? Describe the software development process in brief
- 5) Write short notes on.
  - a) State diagram with the help of diagram
  - b) UML
  - c) Deployment diagram with the help of diagram

**MCA (3<sup>RD</sup>SEM) EXAMINATION 2021**

**DATA STRUCTURE**

**PAPER CODE: MCA303**

**TIME: 3 HOURS**

**MAX MARKS: 50**

**SECTION A**

**5X6=30**

**(Each question carries 6 marks)**

**Answer any 5 of the following questions**

1. Discuss various classifications of data structures with an example.
2. What are circular linked list? What operations you can perform on circular linked lists?
3. What is Red Black Tree? Explain.
4. Explain Quick sort.
5. What do you mean by sorting? Describe the need for sorting.
6. What is prim's algorithm? Explain.
7. What is a binary search tree? Write down its properties.

**SECTION B**

**2X10=40**

**(Each question carries 10 marks)**

**Answer any 2 of the following questions**

1. Write an algorithm for insertion and deletion in Priority Queues.
2. What is stack? Explain.
3. Explain the concept of Recursion with an example.
4. Explain the operation of bubble sort with algorithm.

**MCA (3<sup>RD</sup> SEM) EXAMINATION 2021**

**BUSINESS MANAGEMENT**

**PAPER CODE: MCA304**

**TIME: 3 HOURS**

**MAX MARKS: 70**

**SECTION A 4X7=28**

**(Each question carries 7 marks)**

**Answer any 4 of the following questions**

Q.01:-Define the process of control?

Q.02:-Discuss about steps and process of staffing?

Q.03:-What is the meaning of an organisation structure? Define its advantage and disadvantage.

Q.04:-Write a note on process of strategic management?

Q.05:-define the concept of management by objectives?

Q. 06:-write about meaning, definition and nature of planning?

**SECTION B**

**3X14=42**

**(Each question carries 14 marks)**

**Answer any 3 of the following questions**

Q.01:-What is concept and prospective on human resource management?

Q. 02:-What is concept and techniques of managerial economics.  
Explain the nature and scope of managerial economics?

Q.03:-Define various characteristics, nature and features of planning?

Q.04:-Explain strategies and goals of management control system?

Q.05:-Write short notes on the following:

- a) Staffing
- b) Controlling
- c) Planning

**MCA (3<sup>rd</sup> SEM) EXAMINATION 2021**

**COMPUTER NETWORK  
PAPER CODE: MCA305**

TIME: 3 HOURS

MAX MARKS: 70

**SECTION A**

5X6=30

(Each question carries 6 marks)

Answer any 5 of the following questions

- 1) Explain about LAN.
- 2) Explain various categories of networks.
- 3) Explain Simplex, Half Duplex and Full Duplex Communication.
- 4) Write about Synchronous and Asynchronous transmission.
- 5) Explain the differences between Pure and Slotted ALOHA Systems.
- 6) What is the significance of Bridges? Explain the different types of Bridges.
- 7) Explain the Network layer in the internet.
- 8) Give some advantages of using Cascading Style Sheets. How external style sheet is useful in web page design? (2+3)
- 9) State the function of DNS and the protocol used.

**SECTION B**

4X10=40

(Each question carries 10 marks)

Answer any 4 of the following questions

- 1) Explain the different topologies of the network.
- 2) Explain the TCP/IP model?
- 3) Explain the significance of Switching? What are different switching techniques used in computer networks? Discuss.
- 4) Explain the Services of Transport layer.
- 5) Write about electronic mail in detail.
- 6) Explain leaky bucket and token bucket algorithms.
- 7) With neat sketch explain twisted pair cables, connectors of twisted pair cables with neat graph. Explain the performance of twisted pair cables.