

Hall Ticket Number :

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R-11 / R-13

Code : 1GA61

III B.Tech. II Semester Regular & Supplementary Examinations May 2016

Managerial Economics and Financial Analysis

(Common to EEE & CSE)

Max. Marks: 70

Time: 03 Hours

Answer any five questions

All Questions carry equal marks (14 Marks each)

1. Define Managerial Economics. Explain managerial economics relation with other functional areas. 14M
2. a) Explain law of demand with its exceptions. 7M
b) How do you measure the elasticity of demand? 7M
3. A firm has a fixed cost of Rs.50,000, selling price per unit is Rs.25,000 and present level of production is 3,500 units.
a) Determine BEP in terms of volume and sales value. 10M
b) Calculate the margin of safety. 4M
4. a) What are the features of perfect competition? 7M
b) How price output is determined in case of perfect competition in short run? 7M
5. a) Write about need of public enterprises. 7M
b) What are the problems faced by public enterprises? 7M
6. Explain about the methods and source of finance. 14M
7. Make a trial balance as on 31.12.2002 from the following information

Particulars	Rs.	
Sundry debtors	32,000	
Stock (1.1.2002)	22,000	
Cash in hand	35	
Cash at bank	1,545	
Plant and machinery	17,500	
Sundry creditors	10,650	
Trade expenses	1,075	
Sales	2,34,500	
Salaries	2,225	
Carriage outwards	400	
Rent	900	
Bills payable	7,500	
Purchases	2,18,870	
Discounts (Dr.)	1,100	
Capital	79,500	
Business premises	34,500	14M

8. Write about
a) Liquidity ratios 7M
b) Profitability ratios 7M

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R-11/R-13

Code : 1G161

III B.Tech. II Semester Regular & Supplementary Examinations May 2016

Distributed Systems
(*Computer Science & Engineering*)

Max. Marks: 70

Time: 03 Hours

Answer *any five* questions
All Questions carry equal marks (14 Marks each)

- 1. a) Discuss the various challenges involved in the design of distributed systems. 7M
- b) Discuss the following fundamental models for distributed systems.
 - (i) Interaction model
 - (ii) Failure model 7M
- 2. a) What is Remote Method Invocation? Explain in brief, the implementation of RMI. 7M
- b) Write short notes on Inter Process Communication. 7M
- 3. a) What is thread? How it is different from process? Discuss the architecture for multi-threaded servers. 7M
- b) Discuss operating systems layers in distributed systems. 7M
- 4. a) Explain about peer-to-peer middleware. 7M
- b) Explain about routing overlays. 7M
- 5. a) Explain Cristian method and Berkely algorithm for synchronizing physical clocks. 8M
- b) Explain global states and consistent cuts. 6M
- 6. a) Explain timestamp ordering concurrency control scheme. 8M
- b) Discuss nested transactions in distributed systems. 6M
- 7. a) Define deadlock. By taking suitable example, explain how deadlock can be detected in distributed systems. 7M
- b) Explain logging technique for transaction recovery. 7M
- 8. a) Discuss the role of cryptography in security. 7M
- b) Write short notes on digital signatures. 7M

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R-11/R-13

Code : 1G162

III B.Tech. II Semester Regular & Supplementary Examinations May 2016

Cryptography and Network Security

(Computer Science & Engineering)

Max. Marks: 70

Time: 03 Hours

Answer any five questions

All Questions carry equal marks (14 Marks each)

1. a) What is a security attack? Explain different types of active and passive attacks? 7M
b) Explain how the buffer overflow and format string overflow vulnerabilities occur? 7M
2. a) Explain any one conventional encryption algorithm with an example? 7M
b) What is a secure Hash function? What are its characteristics? 7M
3. How is Kerberos algorithm used for providing authentication in a distributed environment? 14M
4. a) What are the five principal services provided by PGP? 5M
b) Explain S/MIME? 9M
5. a) With a neat sketch, explain IP Security architecture? 7M
b) Mention the differences between transport and tunnel modes in Encapsulating Security Payload? 7M
6. a) Explain Transport layer Security? 9M
b) What is Secure Electronic Transaction? 5M
7. Explain in detail Simple Network Management Protocol? 14M
8. a) Mention firewall design principles? 7M
b) Write a short notes on Trusted Computer Systems? 7M

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R-11/R-13

Code : 1G163

III B.Tech. II Semester Regular & Supplementary Examinations May 2016

Linux Programming

(Computer Science and Engineering)

Max. Marks: 70

Time: 03 Hours

Answer any five questions

All Questions carry equal marks (14 Marks each)

1. a) Explain about Security File Permissions. 7M
b) Distinguish between Process utilities and Disk utilities. 7M
2. a) Explain the Shell responsibilities. 7M
b) Write a Shell program to print prime numbers up to a given number. 7M
3. a) Discuss about System calls in Files. 7M
b) Distinguish File Locking and Record Locking. 7M
4. Explain in detail about kernel support for process, process control, process termination and process API's. 14M
5. a) What are the different IPC techniques? Explain. 7M
b) Write about Unix System Vs API's for Messages. 7M
6. Explain in detail about Semaphores. 14M
7. a) List and explain differences between threads and processes. 7M
b) Explain about POSIX thread API's. 7M
8. a) Write about Socket addresses. 7M
b) Write a simple client/server program for Sockets. 7M

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R-11/R-13

Code : 1G164

III B.Tech. II Semester Regular & Supplementary Examinations May 2016

Object Oriented Analysis and Design

(Common to CSE & IT)

Max. Marks: 70

Time: 03 Hours

Answer any five questions

All Questions carry equal marks (14 Marks each)

1. a) Discuss the four basic principles of modeling. 8M
b) Briefly Explain Diagrams in the UML 6M
2. a) Explain three kinds of relationships. 6M
b) Discuss structural diagrams. 8M
3. What is the role of class diagram? Develop a library information system using class diagram. 14M
4. a) Draw a sequence diagram for ATM withdrawal. 8M
b) Explain the differences between sequence diagram and collaboration diagram through an example. 6M
5. a) Explain how Actors are related to use case diagrams. 6M
b) Define use case diagram and explain its common properties. 8M
6. Write short notes on
(i) Events and signals
(ii) processes and threads
(iii) state diagrams
(iv) Transition and condition 14M
7. a) Discuss the usefulness of deployment diagram. 7M
b) Distinguish between three kinds of components. 7M
8. a) Draw deployment and component diagrams for the library system. 10M
b) Draw a class diagram showing architectural overview of the library system. 4M

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R-11 / R-13

Code : 1G165

III B.Tech. II Semester Regular & Supplementary Examinations May 2016

Software Engineering
(Computer Science & Engineering)

Max. Marks: 70

Time: 03 Hours

Answer any five questions

All Questions carry equal marks (14 Marks each)

- 1. a) What is a software myth? Discuss a few management and practitioners myths and their realities. 7M
- b) What is CMMI? Mention the advantages and disadvantages of both the continuous and staged CMMI models. 7M
- 2. a) Explain RAD model with a neat sketch. Also mention its drawbacks. 7M
- b) Explain the process of creating Software Requirements Document. 7M
- 3. a) How are requirements analyzed and validated in requirements engineering process? 7M
- b) Compare data models and object models. 7M
- 4. a) What are the characteristics of good software design? 7M
- b) What principles are applicable to data design at component level? 7M
- 5. Discuss the steps involved in component level design. 14M
- 6. Explain the different testing strategies. 14M
- 7. a) Mention the differences between reactive and proactive risk strategies. 7M
- b) Explain the steps involved in risk identification and risk projection. 7M
- 8. a) Explain the activities conducted by SQA group to assure software quality. 7M
- b) What are the guidelines followed in formal technical review process? 7M
