

Course: **B.Tech.**

Time: **03 Hrs**

Semester: **6th (Backlog)**

Branch: **CSE**

Max. Marks: **100**

Subject Code: **SOE-B-CSE601**

Subject: **Computer Networks**

Note: Section A: All Questions are compulsory. [10 x 02 marks]

Section B: Answer any 8 questions. [08 x 05 marks]

Section C: Answer any 5 questions [05 x 08 marks]

Q. No.	Section [A]	CO
Q1 a)	Define Computer Network?	CO2
Q1 b)	What is broadcast links and point-to-point links?	CO1
Q1 c)	What is meant by error detection and error correction?	CO3
Q1 d)	Difference between OSI Model and TCP/IP Model?	CO1
Q1 e)	What are Half and Full duplex mode?	CO2
Q1 f)	Define piggybacking?	CO1
Q1 g)	Define ALOHA? Mention its versions of ALOHA?	CO3
Q1 h)	Mention the two types of fragmentation?	CO1
Q1 i)	What is multi-protocol router?	CO2
Q1 j)	Difference between connection-less and connection-oriented service?	CO1

Q. No.	Section [B]	CO
Q2 a)	What is meant by PAN, LAN, MAN and WAN?	CO1
Q2 b)	What is meant by unicasting, broadcasting and multicasting?	CO2
Q2 c)	What is the difference between collision free and contention-based network protocols?	CO3
Q2 d)	Define ALOHA? Mention its versions of ALOHA?	CO1
Q2 e)	State the difference between classless and classful addressing.	CO2
Q2 f)	Bring out the difference between IPv4 and IPv6 address?	CO3
Q2 g)	State the difference between classless and classful addressing.	CO1
Q2 h)	Difference between connection-less and connection-oriented service?	CO1
Q2 i)	Comparison between datagram network and virtual network?	CO2
Q2 j)	What is Adaptive and Non-adaptive routing algorithm?	CO2

Q. No.	Section [C]	CO
Q3 a)	Compare and contrast the ISO/OSI reference model with the TCP/IP reference model.	CO3
Q3 b)	Explain in detail about Network Hardware and types of Networks?	CO1
Q3 c)	Explain in detail about Error Detection and Error Correction codes?	CO1
Q3 d)	Explain in detail about Repeaters, Hubs, Bridges, Switches, Routers, and Gateways?	CO2
Q3 e)	Write a short note on Hierarchical Routing, Broadcast Routing and Multicast Routing?	CO3
Q3 f)	Explain in detail about Repeaters, Hubs, Bridges, Switches, Routers, and Gateways?	CO3
Q3 g)	Explain in detail about Error Detection and Error Correction codes?	CO3

BACKLOG EXAMINATION, JANUARY-2023

Course: **BTech**

Time : **03 Hrs**

Semester: **VI**

Branch: **CSE**

Max. Marks : **100**

Subject Code: **SOE-B-CSE602**

Subject: **Big Data and Cloud Computing**

No. of Pages: **2**

Note: **Section A :** All Questions are compulsory. [10 x 02 marks]
 Section B : Answer any 8 questions. [08 x 05 marks]
 Section C : Answer any 5 questions [05 x 08 marks]

Q. No.	Section [A]	CO
Q 1	Describe the following terminology:	
a	Word Counter	CO4
b	Mapper	CO4
c	Reducer	CO4
d	Cloudburst	CO1
e	Multitenancy	CO1
f	Resource Allocator	CO1
g	Virtualization	CO1
h	Structured Data	CO4
i	Semi-structured Data	CO4
j	Unstructured Data	CO4

Q. No.	Section [B]	CO
Q2 a)	Explain four common considerations in desktop virtualization?	CO2
Q2 b)	What are the shortcomings of Public cloud architecture?	CO1
Q2 c)	Describe in brief about Network Virtualization implement?	CO3
Q2 d)	Explain the Host level of virtualization?	CO3
Q2 e)	What are the shortcomings of traditional IT infrastructures?	CO3
Q2 f)	Explain EC2 and its working?	CO2
Q2 g)	Illustrate at least 5 benefits of Server Virtualization? How does it work?	CO3
Q2 h)	Compare different Cloud Service Models with relevant diagrams?	CO2
Q2 i)	Write at least five MapReduce Characteristics?	CO4
Q2 j)	Explain different decision factors based on deployment models?	CO2

Q. No.	Section [C]	CO
Q3 a)	Conduct a case study on adopting virtualization and cloud workloads for any non-IT organization.	CO4
Q3 b)	Conduct a case study on adopting virtualization and cloud workloads for any IT organization.	CO4
Q3 c)	Compare Virtualization and Cloud Computing? Explain in brief about SLA and Service Catalog?	CO1
Q3 d)	Design and develop a cloud-computing framework for the small-scale product-based company?	CO3
Q3 e)	What is the need of Cloud computing and Virtualization?	CO1
Q3 f)	Explain Para Virtualization and its working?	CO2
Q3 g)	How multiple EC2 can be connected in Amazon Web Services (AWS)?	CO2

16/01/22

OP JINDAL UNIVERSITY, RAIGARH
(C.G.)



END SEMESTER EXAMINATION, JULY-2022

09

Course : **B.Tech**

Time : **03 Hrs**

Semester: **VI** Branch : **CSE**

Max. Marks : **100**

Subject Code: **SOE-B-CSE603**

Subject: **Indian Financial System**

Note: Section A : All Questions are compulsory. [10 x 02 marks]

Section B : Answer any 8 questions. [08 x 05 marks]

Section C : Answer any 5 questions [05 x 08 marks]

Q. No.	Section [A]	CO
Q1 a)	Define the Financial Institutions.	CO1
Q1 b)	What is Primary market?	CO1
Q1 c)	Describe the Capital market.	CO1
Q1 d)	Define the term underwriter.	CO2
Q1 e)	What is Stock exchange?	CO2
Q1 f)	What do you understand by the credit rating agencies?	CO3
Q1 g)	Define the lessee and lessor.	CO3
Q1 h)	What is mutual fund?	CO4
Q1 i)	Define Net Assets Value.	CO4
Q1 j)	What is venture capital?	CO4

Q. No.	Section [B]	CO
Q2 a)	State the components of Indian Financial System.	CO1
Q2 b)	Write brief about the Financial Institution.	CO1
Q2 c)	Describe the function of money market.	CO1
Q2 d)	Explain about the methods of floating new issues.	CO2
Q2 e)	Write the principal stapes of public Issues.	CO2
Q2 f)	Discuss on emerging avenues of rating services.	CO3
Q2 g)	What is Finance lease?	CO3
Q2 h)	Write the history of mutual funds.	CO4
Q2 i)	Classified the mutual fund.	CO4
Q2 j)	Write short note on Angel Investing.	CO4

Q. No.	Section [C]	CO
Q3 a)	Write the Characteristics and functions of the financial market.	CO1
Q3 b)	Differentiate the Primary Market and Secondary Market.	CO1
Q3 c)	Differentiate the Operating and Financial Lease.	CO2
Q3 d)	Discuss on Credit Rating agencies in India.	CO3
Q3 e)	Write the advantages of investing in Mutual funds.	CO4
Q3 f)	Write the scope of venture capital.	CO4
Q3 g)	Write a short note on Indian Financial System.	CO1

18101123
04

OP JINDAL UNIVERSITY, RAIGARH
(C.G.)



END SEMESTER EXAMINATION, JULY-2022

Course : **B.Tech**

Time : **03 Hrs**

Semester: **VI** Branch : **CSE**

Max. Marks : **100**

Subject Code: **SOE-B-CSE604 (3)** Subject: **Cryptography and Information Security**

Note: Section A : All Questions are compulsory. [10 x 02 marks]

Section B : Answer any 8 questions. [08 x 05 marks]

Section C : Answer any 5 questions [05 x 08 marks]

Q. No.	Section [A]	CO
Q1 a)	What are the essential ingredients of symmetric cipher?	CO1
Q1 b)	What are the round function in feistel cipher structure	CO1
Q1 c)	List out the advantages of RC4 algorithm.	CO2
Q1 d)	Does the set of residue classes modulo 3 form a group with respect to addition?	CO2
Q1 e)	State Chinese Remainder Theorem	CO3
Q1 f)	Write the ingredients of Public Key Cryptosystem	CO3
Q1 g)	What is a Hash Function?	CO4
Q1 h)	What are the Difference Between MAC and HMAC	CO4
Q1 i)	What is an Intruder?	CO5
Q1 j)	What is an audit record?	CO5

Q. No.	Section [B]	CO
Q2 a)	Compare and contrast Linear Cryptanalysis and Differential Cryptanalysis.	CO1
Q2 b)	Demonstrate model for internetwork security with neat diagram?	CO1
Q2 c)	Describe AES algorithm with neat diagram.	CO2
Q2 d)	Explain Ring with a suitable example.	CO2
Q2 e)	What are the characteristics of Public key cryptosystem?	CO3
Q2 f)	How key distribution is done using public key cryptosystem.	CO3
Q2 g)	What are the requirements and security of any cryptographic hash function?	CO4
Q2 h)	What is Digital Signature Standard [DSS]?	CO4
Q2 i)	Compare different threads on web.	CO5
Q2 j)	What are the different techniques to generate passwords?	CO5

Q. No.	Section [C]	CO
Q3 a)	Explain each step in DES with neat diagram.	CO1
Q3 b)	What is a group? Explain with an example.	CO2
Q3 c)	Explain Diffie-Hellman Key exchange with the help of an example.	CO3
Q3 d)	Explain RSA algorithm with a suitable example	CO3
Q3 e)	Explain Secure Hash Algorithm (SHA)?	CO4
Q3 f)	Explain SSL Stack Protocol	CO5
Q3 g)	Explain the taxonomy of a Malicious program	CO5

OP JINDAL UNIVERSITY, RAIGARH (C.G.)

END SEMESTER EXAMINATION, JAN-2023



05

Course : **B. Tech CSE**

Time : **03 Hrs**

Semester: **VI**

Branch : **Computer Science and Engg.**

Max. Marks : **100**

Subject Code: **SOE-B-CSE605(3)**

Subject: **Digital Image Processing**

Note: Section A: All Questions are compulsory. [10 x 02 marks]

Section B: Answer any 8 questions. [08 x 05 marks]

Section C: Answer any 5 questions [05 x 08 marks]

Q. No.	Section [A]	CO
Q1 a)	Describe the methods of image sensing and acquisition?	C01
Q1 b)	Define digital image.	C01
Q1 c)	What is compression Ratio	C04
Q1 d)	What are the types of blurs in digital images?	C03
Q1 e)	What is Fourier transform shift?	C03
Q1 f)	Define intensity and pixel.	C01
Q1 g)	What is image enhancement?	C02
Q1 h)	What is Fourier's basic hypothesis?	C02
Q1 i)	Draw and explain the visual electromagnetic spectrum.	C03
Q1 j)	What are the approaches of image compression.	C04

Q. No.	Section [B]	CO
Q2 a)	Explain the fundamental steps in digital image processing.	C01
Q2 b)	Explain the process of conversion from analog to digital image.	C01
Q2 c)	Explain image sharpening in spatial domain	C02
Q2 d)	What is spatial resolution and grey level resolution	C02
Q2 e)	Explain wavelet transform.	C02
Q2 f)	Explain the use of histogram in the digital image processing.	C02
Q2 g)	Explain the model of image degradation and restoration process	C03
Q2 h)	Explain the arithmetic and geometric mean filters used in image restoration	C03
Q2 i)	Explain the types of image degradation.	C04
Q2 j)	What are the types of data redundancies in digital images?	C04

Q. No.	Section [C]	CO
Q3 a)	Explain the simple image formation model in detail.	C01
Q3 b)	Discuss the various applications of digital image processing.	C01
Q3 c)	Discuss different components of an Image processing system.	C01
Q3 d)	Explain the low pass filtering for image smoothing in frequency domain	C02
Q3 e)	Write the detailed note on frequency domain filtering.	C02
Q3 f)	What are the types of noise present in an image degradation model?	C03
Q3 g)	Explain Huffman coding tree with the help of an example.	C04
