

Bachelor of Engineering
Fifth Semester Main Examination, Dec-2020
Data Communication [IT-501]
Branch - IT

Time: 3:00 Hrs

Max Marks 70

Note : 1. Attempt any five questions out of eight.
2. Each question carries equal marks.

- Q.1 (a) Explain LAN, WAN and MAN
(b) Compare FDM, WDM and TDM
- Q.2 (a) Explain transparent bridge.
(b) What is the role of RARP and BOOTP?
- Q.3 (a). Explain STAR, BUS and RING topology in detail.
(b) Distinguish between IPv4 and IPv6.
- Q.4 (a) What is routing? Explain.
(b) Define packet. Explain packet switching.
- Q.5 (a) Explain the three important functions of a Network Layer.
(b) What is the role of SMTP and HTTP?
- Q.6 (a) Write in brief about digital signature.
(b) What is CSMA? Explain working of CSMA/CD.
- Q.7 (a) Explain in detail the classification of transmission model.
(b) Compare OSI reference model with TCP/IP reference model.
- Q.8 Write short notes on following:
i) DNS
ii) Firewall
iii) HDLC

Bachelor of Engineering
Fifth Semester Main Examination, December 2020
Information Storage & Management [IT-502]
Branch- IT

Time: 3:00 Hrs

Max Marks 70

Note : 1. Attempt any five questions out of eight.

2. Each question carries equal marks.

- Q.1 (a) Discuss the NFS in details.
(b) Explain contrast of integrated Vs modular array.
- Q.2 (a.) Write different between SATA and SAS.
(b) Explain characteristics and benefits of ILM.
- Q.3 (a) Explain features and benefits of context addressable storage.
(b) Explain about backup technology.
- Q.4 (a) What is storage array? Explain classification of storage array.
(b) Describe the SCSI command model.
- Q.5 (a) What is DRC? Write different between SMIS and CIM?
(b) What is different between scalability and elasticity for cloud computing?
- Q.6 (a) Discuss RAID levels and parity algorithm in details.
(b) What is cloud? Write the list of benefits of cloud.
- Q.7 (a) What do you understand by software as service?
(b) Why do we need data centers? Write difference between reliability and availability.
- Q.8 (a) Discuss storage infrastructure components.
(b) What is hat sparing? Explain with diagram

Enrollment No.....

Bachelor of Engineering
Fifth Semester Main Examination, Dec-2020
Computer Networks [IT-503]
Branch: IT

Time: 3:00 Hrs

Max Marks 70

- Note: 1. Attempt any five questions out of eight.**
2. All question carry equal marks.

- Q.1 (a) What is computer network and how it is different from distributed system?
(b) State the seven layers of the OSI model. Describe the function of each layer.
- Q.2 (a) Explain sliding window protocol. Define Go-back-N protocol in detail.
(b) Explain the design issues of network layer.
- Q.3 (a) Explain the difference between TCP and UDP protocols.
(b) How does CSMA/ CD differ from CSMA/CA?
- Q.4 (a) What is difference between Slotted aloha and Pure aloha?
(b) What is queuing theory? Explain the queuing system M/M/1.

- Q.5 (a) Write any two differences between connection oriented and connectionless service
(b) Explain the main features of transmission control protocol.
- Q.6 Write a short note on:-
(i) ICMP (ii) DHCP (iii) ARP and RARP
- Q.7 (a) Briefly explain the following:-
(i) SDLC (ii) Spanning tree bridges
(b) How adaptive tree walk protocol works?
- Q.8 Write short note on:-
(i) HTTP (ii) DNS (iii) FTP

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Bachelor of Engineering
Fifth Semester Main Examination, Dec-2020
System Programming and Operating System [IT-504]
Branch: IT

Time: 3:00 Hrs

Max Marks 70

Note : 1. Attempt any five questions out of eight.

2. All question carry equal marks.

- Q.1 (a) Write the different between multitasking & multiprogramming.
(b) Explain various methods of accessing file with examples.
- Q.2 (a) Discuss various free space management techniques. Explain them in detail.
(b) What is deadlock? What are the necessary conditions for a deadlock occur?
- Q.3 (a) Briefly explain the following:
(i) Mutual exclusion
(ii) Critical section problem
(b) Write short notes:-
(i) Distributed shared memory
(ii) Process management in Linux
- Q.4 (a) Explain different types of schedules along with the purpose of each.
(b) Differentiate between external and internal fragmentation.
- Q.5 (a) What is meant by thrashing? Explain various causes of thrashing.
(b) Write key features of window file system.
- Q.6 (a) What is virus? Write difference between worms and virus.
(b) Discuss various security threats in file system of operating system.
- Q.7 (a) Write short note on:
(i) Parallel operating system
(ii) Fragmentation

(b) Explain Cache memory organization.

- Q.8 Define following:
- (i) FIFO replacement
 - (ii) LRU replacement
 - (iii) Optimal replacement
 - (iv) RPC

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Bachelor of Engineering
Fifth Semester Main Examination, Dec-2020
Java Programming [IT-505]
Branch: IT

Time: 3:00 Hrs

Max Marks 70

Note : 1. Attempt any five questions out of eight.
2. All question carry equal marks.

- Q.1 (a) Explain the concept of java development kit (JDK) and java virtual machine in detail.
(b) Explain the concept of interface and packages with example.
- Q.2 (a) What is java applet? Describe it with suitable example.
(b) What is abstract window toolkit (AWT)?
- Q.3 (a) Explain the concept of thread. Describe the life-cycle thread with suitable example.
(b) What is frame in java? Explain various frame layouts in java.
- Q.4 (a) Explain the Java event handling model. Describe self-contained events and delegating events.
(b) Discuss the life cycle at applet with suitable example.
- Q.5 (a) What is exception handling in java?
(b) What is multithreading? Write a suitable java programing to implement the concept of multithreading.
- Q.6 (a) Describe the various java net package in detail.
(b) Describe various exception types in java in details.
- Q.7 (a) Describe various java input/output file system classes in detail.
(b) Write steps to create RMI application and explain with example.
- Q.8 (a) Describe the JDBC connectivity model with suitable java program.
(b) Describe java application programming interface (API) in details.