G 1157 (Pages : 2) Reg. No.....ECE.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2012

Eighth Semester

Branch : E.C.E./Applied Electronics and Instrumentation/E.I.E.

COMPUTER NETWORKS (L A S)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*

Part A

Each question carries 4 *marks.*

1. Explain the functions of Network layer in TCP/IP model.
2. Describe Full Duplex transmission.
3. What is a Virtual Circuit?
4. Explain the relevance of routing.
5. Discuss the need for Flow Control.
6. Explain a Ring Network with a neat sketch.
7. What is Cryptography?
8. Briefly explain a client-server model.
9. What is SONET?
10. Explain Distributed Systems.

(10 × 4 = 40 marks)

Part B

Answer any **five** *questions.*

Each full question carries 12 *marks.*

11. Explain the ISO-OSI 7 layer protocol architecture.

(12 marks)

Or

12. (a) Explain the concept of WAP technology.

    (b) Compare baseband and broadband transmission.

(6 + 6 = 12 marks)

Turn over

13. (a) Explain the need for Data link layer.

(b) Explain the stop and wait flow control mechanism.

(6 + 6 = 12 marks)

Or

14. Write technical notes on :

(a) Congestion control.

(b) Frame design consideration of DLL.

(6 + 6 = 12 marks)

15. Explain CSMA/CD mechanism. Discuss its advantages and limitations.

(12 marks)

Or

16. (a) Explain the design issues of Transport layer.

(b) Explain the process of establishing and releasing a connection.

(6 + 6 = 12 marks)

17. (a) Explain the design issues of the Session layer.

(b) Write a technical note on Remote Procedure Call.

(6 + 6 = 12 marks)

Or

18. (a) Explain the functions of Presentation layer.

(b) Describe the different approaches to attain message authentication.

(6 + 6 = 12 marks)

19. Explain the ATM protocol architecture.

(12 marks)

Or

20. Explain the basic principles of SDH and SONET.

(12 marks)

[5 × 12 = 60 marks]

G 1164 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2012

Eighth Semester

Branch : Electronics and Communication Engineering

ADVANCED COMMUNICATION SYSTEMS (L)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*

Part A

Each question carries 4 *marks.*

1. What are the characteristics of geosynchronous orbits?
2. What is LNB? Explain its functions.
3. Differentiate between multiplexing and multiple access techniques.
4. What is queueing system?
5. Why is a honeycomb pattern selected for a cell area?
6. What is meant by near-far effect?
7. What are the characteristics of 3G cellular networks?
8. What are the advantages of GPS?
9. What are the different types of spread spectrum techniques?
10. What are the applications of spread spectrum communication systems?

(10 × 4 = 40 marks)

Part B

Each question carries 12 *marks.*

11. (a) What are the orbital parameters required to determine a satellite's orbit?

    (b) Describe the method of station keeping of a satellite.

(5 + 7 = 12 marks)

Or

12. (a) Explain with diagram the telemetry, tracking and command subsystem.

    (b) Discuss on the configurations of various INTELSAT systems.

(8 + 4 = 12 marks

Turn over

13. (a) What is a common-signalling channel and how it is used?

(b) Explain with diagrams the working of a SSMA system.

(4 + 8 = 12 marks)

Or

14. (a) What are the advantages of switching techniques.

(b) Describe the message switching technique used in satellite communication systems.

(4 + 8 = 12 marks)

15. (a) What are the differences between macrocells, minicells and microcells.

(b) Describe frequency reuse. Why is it useful in cellular telephone systems?

(4 + 8 = 12 marks)

Or

16. (a) Differentiate between a soft and a hard hand off.

(b) Describe a repeater used in cellular communication system.

(4 + 8 = 12 marks)

17. (a) Explain the principle of cordless telephone. What are its advantages and limitations?

(b) Describe the architecture of GSM.

(5 + 7 = 12 marks)

Or

18. (a) What are the services offered by GSM? Explain its characteristics also.

(b) Explain the position calculations used in GPS.

(6 + 6 = 12 marks)

19. (a) Explain with diagrams the principle of a time hopping spread spectrum system.

(b) What are the advantages of hybrid spread spectrum system?

(8 + 4 = 12 marks)

Or

20. (a) Explain with diagrams the generation and detection of DS spread spectrum signals.

(b) What is chip spread spectrum system?

(8 + 4 = 12 marks)

[5 × 12 = 60 marks]

G 1175 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2012

Eighth Semester

Branch : Electronics and Communication Engineering/Applied Electronics and Instrumentation/ Electronics and Instrumentation

ADVANCED MICROPROCESSORS (L A S)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*

Part A

Each question carries 4 *marks.*

1. Explain how pipelining is incorporated in 8086 processor.
2. What is meant by memory banking? Explain the even and odd memory banks.
3. What are the various segment registers in 8086?
4. Explain the index addressing in 8086 with examples.
5. What are Descriptors and Selectors?
6. Distinguish between Real and Protected mode of operation.
7. Explain the paging mechanism in 80386 processor.
8. Discuss on Task State segment and task switching.
9. What are the advanced features of 80486 processor?
10. Explain the super scalar architecture of Intel processor.

(10 × 4 = 40 marks)

Part B

Each question carries 12 *marks.*

11. Explain with neat diagram the minimum and maximum mode of operation in 8086 processor.

Or

12. (a) Discuss the features of 8087 mode co-processor.

    (b) Explain the interrupt vector table in 8086.

Turn over

13. Explain the following addressing modes in 8086 with suitable examples :

(a) Immediate addressing. (b) Register addressing.

(c) Direct addressing. (d) Scaled addressing.

Or

14. List the program memory addressing modes in 8086 with suitable examples.

15. With a neat block diagram, explain the architecture of 80286 processor bringing out its salient features.

Or

16. (a) What are the different addressing modes supported by 80286?

(b) Discuss the different types of descriptors supported by 80286 and their typical functions.

17. Explain the following signal functions of 80386 :

(a) BE0 # – BE3 #. (b) W/R #.

(c) D/C. (d) ADS #.

(e) NA #. (f) BS16.

Or

18. (a) What are the differences between logical address, linear address and physical address?

(b) What is translation look aside buffer? How does it speed up the execution of the programs?

19. (a) List the major architectural advancements in 80486 over 80386.

(b) Explain the cache management unit of 80486.

Or

20. Explain the following terms :

(a) VLIW. (b) Branch prediction logic.

(c) BIST. (d) MMX technology.

(5 × 12 = 60 marks)

G 1184 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2012

Eighth Semester

Branch : Electronics and Communication Engineering

TELEVISION ENGINEERING (L)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 4 *marks.*

1. What is interlaced scanning ? Explain.
2. What is the effective no. of lines scanned in 625 B TV system ? Explain.
3. Write the main features of PIL tube.
4. Write the advantages of CCD camera.
5. Explain the need of a BALUN transformer.
6. With a circuit diagram, briefly explain about EHT generation.
7. Write the main features of PAL system.
8. What is colour burst ? Explain the need of colour burst.
9. What is a cable converter ? Explain.
10. Explain about LNB.

(10 × 4 = 40 marks)

Part B

Answer **all** *questions.*
Each question carries 12 *marks.*

11. What is the horizontal retrace period for a 625-B TV system ? Explain how it is effectively utilized.

Or

12. Explain the following terms :—

    (i) Half line discrepancy. (ii) Equalizing pulses.

    (iii) Sync. pulses. (iv) Blanking pulses.

13. Draw the detailed block diagram of a TV transmitter and explain the working.

Or

14. With a neat diagram, explain the working of CCD camera.

Turn over

15. Explain with a block diagram, how the sync. signals are processed in a TV receiver.

Or

16. What is the need of AGC in TV receiver ? Draw and explain the working of delayed AGC.

17. (a) What is frequency interleaving ? Explain. (5 marks)

    (b) Explain how the phase error is cancelled in PAL system. (7 marks)

Or

18. With a block diagram, explain the working of PAL decoder.

19. What is HDTV ? Write the different characteristics of HDTV.

Or

20. With a neat block diagram, explain the operation of CCTV.

[5 × 12 = 60 marks]

G 1245

(Pages : 2)

Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2012

Eighth Semester

Branch : Electronics and Communication Engineering/A.E and I./Electronics and Instrumentation Engineering

MULTIMEDIA SYSTEMS (Elective III) (LAS)

(Regular/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Answer **all** *questions.*

Part A

Each question carries 4 *marks.*

1. What is analog video?
2. List the common multimedia input and output hardware.
3. Write notes on RLE.
4. Explain what are fractals.
5. Explain what is quicktime.
6. What are Microsoft Multimedia Extensions?
7. Write notes on database integration.
8. Explain what are classes for programming. How are they useful?
9. Explain the uses of image synthesis.
10. Write notes on multimedia networks.

(10 × 4 = 40 marks)

Part B

Each question carries 12 *marks.*

11. Write detailed notes on multimedia authoring tools.

Or

12. Discuss the various storage media for multimedia applications.
13. Discuss the various aspects of handling images of multimedia systems.

Or

14. Explain fractals and wavelets and the techniques used for their compression.

Turn over

15. Explain the DVI standard in detail.

Or

16. Discuss the compact disk family in detail.

17. Explain the various classes for multimedia programming.

Or

18. Discuss the problems in programming multimedia applications.

19. Write notes on (a) Virtual reality ; (b) Video conferencing.

Or

20. Explain video capture techniques in detail.

(5 × 12 = 60 marks)