TE Sem-V Comp. CBGS. May 2018

SOAD

31-5-2018

Q.P. Code: 37072

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(3 HOURS) [Total Marks: 80]

N.B.: (1) Question no. 1 is compulsory.
(2) Attempt any three questions from remaining.
(3) Assume suitable data wherever necessary.

Q1. (a) What is Unified Modeling Language (UML)? Explain need of UML with examples. (10)
(b) Explain the development of SRS document for any suitable case study. (10)

Q2. (a) Explain different steps to draw DFD with suitable example. (10)
(b) Draw and explain class diagram for car rental management system. (10)

Q3. (a) Explain types of cohesion and coupling in software design. (10)
(b) What is feasibility analysis? Explain payback analysis with example. (10)

Q4. (a) How to identify use case and actors for use case diagram? Identify use cases & actors and draw use case diagram for online book shopping. (10)
(b) Explain requirement gathering techniques used in system analysis. (10)

Q5. (a) Explain different elements of activity diagram with suitable example. (10)
(b) What is use of sequence diagram in system design? Draw sequence diagram for ticket vending machine. (10)

Q6. Attempt the following (any two) (20)
a) User Interface Design
b) Component and deployment diagram
c) Zachman framework
d) System security and integrity measures

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Q. P. Code: 24646

25|5|18

Duration – 3 hours

Maximum Marks - 80 (1/2)

Note:

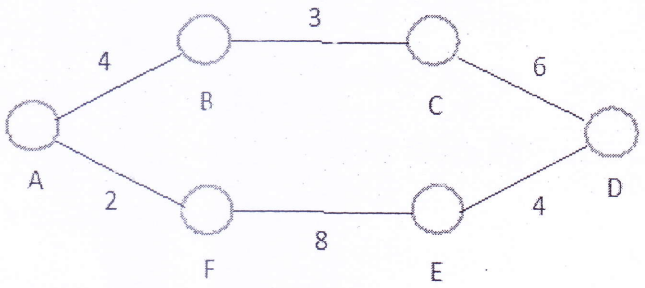
1. Question No 1 is compulsory.
2. Attempt any 3 questions from the remaining 5 questions.
3. Draw neat diagrams wherever necessary.

Q.No. 1 Explain in Brief: 20

a. Explain the method to find number check bits required to correct single bit error for a 10 bit message and compute the check bits for 11100 00101.

b. Encode the message 101111100001 using binary encoding, Manchester encoding and differential Manchester encoding

c. Find the shortest path between A and D using Dijkstra Algorithm.



d. What are the different world wide unique identifiers? Explain the components of Uniform Resource Locators.

Q.No. 2(a) Explain how a strong Generator Polynomial is formed. Give the Algorithm for computing the checksum. 10

Q.No. 2(b) Explain any two collision free protocols 10

Q.No. 3(a) Explain the reasons for congestion in a network. Explain open loop congestion control methods. 10

Q.No. 3(b) Explain TCP IP reference model and compare it with OSI reference model. 10

Q.No. 4(a) Explain how the value of 'n' is decided in an n bit sliding window protocol. Explain the advantages of Selective repeat over go-back n protocol. 10

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Q.No. 4(b) Prove that the slotted ALOHA performs better than Pure ALOHA. 10

Q.No. 5(a) Compare Guided media w.r.t unguided media 10

Q.No. 5(b) Compare Routing protocols RIP, OSPF and BGP 10

Q.No. 6 Give Short notes on any two 20

a. DNS
b. SNMP
c. Sockets and Socket Programming

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T-2825/T.E. (computer) (sem-V) (R-2012) (CBSGS) 1/1

Sub: Microprocessor Date: 21/05/2018

Q. P. Code: 21318

(Time: 3Hrs) **Max Marks: 80**

NB: 1. Question No.1 Compulsory.
2. Solve any THREE from Q.2 to Q.6
3. Assume suitable data whenever necessary with justification.

Q1. Solve any FOUR.

(A) Explain Memory banks for 8086 Processor (5)

(B) Draw and Explain Floating Point Pipeline for Pentium Processor. (5)

(C) Explain Multitasking and Protection for 80386 processor (5)

(D) Explain Flag Register bits of 8086. (5)

(E) Explain Virtual Mode (VM86) 80386 Processor. (5)

Q2. (A) Explain Interrupt Structure of 8086 Processor. (10)

(B) Explain PPI 8255 with block diagram. (10)

Q3. (A) Draw and Explain write operation timing diagram for maximum mode. (10)

(B) Explain Operating Modes of PIC 8259. (10)

Q4. (A) Explain following instructions. (10)
DAA, AAA, XLAT, LAHF

(B) Explain Segment Descriptor of 80386 Processor. (10)

Q5. (A) Explain Gate type of descriptors. (10)

(B) Explain Data Cache architecture for Pentium Processor. (10)

Q6. (A) Explain SPARC Processor with block diagram. (10)

(B) Explain with block diagram PIT 8254 (10)

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