VASAVI COLLEGE OF ENGINEERING *(Autonomous)*, HYDERABAD
M.C.A. (CBCS) III-Semester Backlog (Old) Examinations, December-2018
Software Testing

Time: **3** hours

Max. Marks: **70**

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. Give an example for a test case
2. When and why is a decision table used in testing?
3. Define path testing?
4. Define a control graph.
5. Draw the waterfall life cycle model
6. When will interaction testing become necessary?
7. Define 'Unit' in the context of object oriented testing.
8. Draw a sample currency converter GUI.
9. List out the challenges faced in software testing automation.
10. List different forms of Millennium testing.

Part-B (5 × 10 = 50 Marks)

11. a) Explain the Next Date Function example system with the conditions C1,C2, C3. [6]

    b) Write boundary value analysis test cases for a function F with two variables x, y. [4]

12. a) How is basis path testing done? Explain with respect to the graph specified with the edges (E):- E1:A→ B, E2:A→D, E3:B→C, E4:B→G, E5:D→G, E6:C→B. [6]

    b) When and how is data flow testing done? [4]

13. a) What are the pros and cons of top down and bottom up integrations? How does sandwich testing overcome the drawbacks? [6]

    b) Write briefly about the taxonomy of interactions. [4]

14. a) Define MM-path for object oriented software? Give relevant example. [5]

    b) Write about the implications of composition and encapsulation. [5]

15. a) Explain briefly about the architecture for testing automation. [5]

    b) What is the methodology used in exploratory testing? [5]

16. a) Differentiate between weak and strong equivalence class testing. [5]

    b) Explain how functional and structural testing is done with an example. [5]

17. Answer any *two* of the following:
    a) Pairwise integration [5]
    b) GUI testing [5]
    c) Process model for testing automation. [5]

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Hall Ticket Number:

Code No. : 33014

VASAVI COLLEGE OF ENGINEERING *(Autonomous)*, HYDERABAD
MCA (CBCS) III-Semester Main Examinations, December-2018
Computer Networks

Time: **3 hours**   Max. Marks: **60**

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Q. No		Stem of the Question	M	L	CO	PO
		Part-A (10 × 2 = 20 Marks)				
1.		What are the different ways communication takes place between two devices?	2	1	1	1
2.		List the different types of modem.	2	2	1	1
3.		How Error Control achieved in Data Link layer?	2	1	2	1
4.		Compare Slotted Aloha with Pure Aloha.	2	3	2	1
5.		What are the types of fragmentations? Define them?	2	1	3	1
6.		Suppose that instead of using 16 bits for the network part of a class B address originally, 21 bits had been used. How many class B networks would have been?	2	5	3	4
7.		What is the maximum and minimum size of the process data that can be encapsulated in a UDP datagram?	2	3	4	1
8.		List the Transport Layer Service Primitives	2	2	4	1,4
9.		Differentiate between POP3 protocol and IMAP protocol	2	3	5	5
10.		Imagine that someone in the CS Department at Stanford has just written a new program that he wants to distribute by FTP. He puts the program in the FTP directory *ftp/pub/freebies/newprog.c*. What is the URL for this program likely to be?	2	6	5	3
		Part-B (5 × 8=40 Marks)				
11.	a)	Explain how Bus Topology disadvantages are overcome in Ring Topology	4	2	1	1
	b)	How many types of pins are there in RS232? Describe briefly about the pins?	4	1	1	1
12.	a)	Explain the Go Back N ARQ Protocol.	6	1	2	3
	b)	Differentiate between Fast Ethernet and Giga Byte Ethernet.	2	3	2	3
13.	a)	Explain the IPv4 header format with a neat diagram.	4	2	3	1,3
	b)	Explain distance vector routing algorithm with an example.	4	2	3	3
14.	a)	TCP opens a connection using an initial sequence number (ISN) of 14,534. The other party opens the connection with an ISN of 21,732. Show the three TCP segments during the connection establishment.	4	4	4	5
	b)	Explain about Multiplexing.	4	1	4	1
15.	a)	Explain three domains of the domain name space in internet.	4	2	5	1
	b)	Illustrate the working mechanism of FTP with a neat diagram.	4	3	5	1,5
16.	a)	Explain the TCP/IP model with a neat diagram.	4	1	1	1,5
	b)	A bit stream 10011101 is transmitted using the standard CRC method describe in the text. The generator polynomial is $x^3 + 1$. Show the actual bit string transmitted. Suppose the third bit from the left is inverted during transmission. Show that this error is detected at the receiver's end.	4	3	2	2

17.	Answer any *two* of the following:				
a)	An organization is granted the block 130.56.0.0/16. The administrator wants to create 1024 subnets. I. Find the subnet mask. II. Find the number of addresses in each subnet. III. Find the first and last addresses in subnet 1. IV. Find the first and last addresses in subnet 1024.	4	4	3	2
b)	How are congestion control and quality of service related?	4	3	4	1
c)	Illustrate HTTP request message format with an example.	4	1	5	1

M: Marks; L: Bloom's Taxonomy Level; CO: Course: Outcome; PO: Programme Outcome

S. No.	Criteria for questions	Percentage
1	Fundamental knowledge (Level-1 & 2)	60%
2	Knowledge on application and analysis (Level-3 & 4)	35%
3	*Critical thinking and ability to design (Level-5 & 6) (*wherever applicable)	5%

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