Hall Ticket Number:

1	6	0	2	1	9	7	3	5	0	5	7

Code No. : 16438 AS

VASAVI COLLEGE OF ENGINEERING *(AUTONOMOUS)*, HYDERABAD

Accredited by NAAC with A++ Grade

B.E. (E.C.E.) VI-Semester Advanced Supplementary Examinations, August-2022

Computer Networks

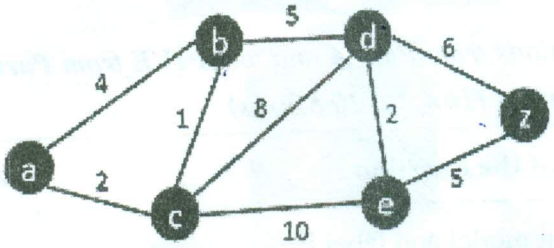
Time: **3 hours** Max. Marks: **60**

*Note: Answer all questions from **Part-A** and any **FIVE** from **Part-B***

Part-A (10× 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	Draw the Data communication model and label it.	2	1	1	1
2.	Mention the Disadvantage of Stop and wait protocol and advantage of sliding window protocol.	2	2	1	1
3.	What is Piggybacking?	2	1	2	1
4.	Identify the bits that are stuffed in the received information "11110101010101111101111101111010101010101111100000" and retrieve the original data using bit stuffing concept.	2	3	2	2
5.	State principle of Optimality.	2	1	3	1
6.	Justify why Flooding is not secure mechanism to be used in routing strategy.	2	3	3	1
7.	List the Primitives used in Transport layer.	2	1	4	1
8.	Draw the TCP Header format.	2	2	4	1
9.	Identify the elements of the URL "http//:www.vce.ac.in".	2	2	5	1
10.	Apply the Caesar cipher with 4 and get the cipher text for the following plain text "VASAVI COLLEGE OF ENGINEERING"	2	3	5	2
	Part-B (5 × 8 = 40 Marks)				
11. a)	Compare OSI and TCP/IP Reference model.	4	1	1	1
b)	Explain the Design issues of Data link layer.	4	2	1	1
12. a)	Explain1-persistent ,non-persistent and p-persistent CSMA using the flow chart.	4	3	2	1
b)	Draw the Frame format of 802.3 and 802.16 standards.	4	1	2	1

Contd... 2

13. a)	Explain various routing strategies used in networking with the help of topology.	4	2	3	1
b)	Find the shortest path from a to z using Dijkstra's Algorithm 	4	4	3	2
14. a)	Discuss the services provided and elements of the Transport Layer.	4	2	4	1
b)	Justify why TCP is reliable over UDP?	4	3	4	1
15. a)	Discuss the steps involved in Emailing and types of protocols used in it.	5	2	5	1
b)	Mention the applications of Digital signatures.	3	2	5	1
16. a)	Illustrate Selective repeat ARQ in all the cases with an example.	4	3	1	1
b)	Discuss with an example the implementation of circuit, datagram and virtual switching techniques.	4	3	2	1
17.	Answer any ***two*** of the following:				
a)	Explain the advantages of Token bucket algorithm and load shedding to control congestion.	4	2	3	1
b)	Draw the TCP header format and explain in detail.	4	3	4	1
c)	If the plain text is " pleasewaitinlobbyatfourpm" ,find the cipher text with the key 654123 using Transposition method.	4	3	5	2

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

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	37.5%
iii)	Blooms Taxonomy Level – 3 & 4	42.5%

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