

## **BRAINWARE UNIVERSITY**

Course - BSc. (HN)

## **Advanced Networks (BHN301)**

(Semester - 3)

Time allotted: 3 Hours Full Marks: 70

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

## $Group -\!\!A$

	(Multiple Choice	e Type Questions)				
	` -	$10 \times 1 = 1$	10			
1.	Choose the correct alternative from the following					
(i)	Data framing happens at which layer of the OSI Model?					
	a. Physical	b. Data Link				
	c. Network	d. Transport				
(ii)	Router works at layer.					
	a. Data Link	b. Network				
	c. Transport	d. None of these				
(iii)	oes a router use to relay data packets between	n				
	networks?					
	a. Application and Media	b. Path determination and Switching				
	c. Broadcast and Collision	d. None of these				
	Domain					
(iv)	When all the routers in a network are of	operating with the same knowledge, the network	:k			
	is said to have done which of the follow	wing?				
	a. Converged	b. Formalized				

d. None of these

c. Reconfigured

(v)	(v) Which of the routing protocol does not contain subnet mask information in its rou						
	update	s?					
	a.	EIGRP	b.	OSPF			
	c.	RIP version 1	d.	RIP version 2			
(vi)	Packet	Switching is a layer s	witc	hing technology.			
	a.	Physical	b.	Data Link			
	c.	Session	d.	None of these			
(vii	) Which	algorithm is used to achieve rapid con	nver	gence?			
	a.	Dijkstra Algorithm	b.	Diffusing Update Algorithm (DUAL)			
	c.	Convergence Algorithm	d.	Dual Convergence Algorithm			
(viii	) Which	protocol is CISCO proprietary and	d de	signed to carry traffic from multiple			
	VLAN	Is?					
	a.	802.11A	b.	802.1Q			
	c.	VNET	d.	ISL			
(ix)	VTP s	witches can operate in which mode(s)	?				
	a.	Server	b.	Client			
	c.	Transparent	d.	All of the above			
(x)	Auton	omous System Number (ASN) ranges					
	a.	1 - 65535	b.	1 - 65536			
	c.	0 - 65535	d.	0 - 65536			
		Group –	R				
		(Short Answer Type		estions)			
		(Answer any three from	the	<u> </u>			
2.	Write a sl	hort note on 'VLAN Trunking Protoco	ol (X	$3 \times 5 = 15$ (TP)'. [5]			
3.		ss the relevance of 'Area' concept in (	,	•			
٥.	ŕ	is the role of Flash Memory in router?		[3]			
4.	ŕ	he importance of 'LLC Sublayer'.		[5]			
<del>4</del> . 5.	•	he use of 'VLAN1'?					
				[5]			
6.	Denne –	Distance Vector Routing Protocol		[5]			

## Group-C

(Long Answer Type Questions)
(Answer any *three* from the following)

 $3 \times 15 = 45$ 

			$3 \times 15 = 4$
7.	(a)	What is 'APIPA'?	
	(b)	Write down the range of Private and Public IP address for Class A,	
		B, C.	
	(c)	Write short note on IPv6.	[5+5+5]
8.	(a)	Discuss the advantages of Spanning Tree Protocol (STP).	[5]
	(b)	How do the OSPF decides the best route?	[10]
9.		Explain the process of taking backup of IOS from flash memory to	
		TFTP server in a router and restoring the IOS from TFTP server to	
		flash memory.	[15]
10.	(a)	Explain the functions of Session Layer of OSI Reference Model.	[5]
	(b)	Discuss the encapsulation process (Step by Step).	[10]
11.	(a)	Discuss the different networking topologies.	[5]
	(b)	What is 'Circuit Switching'?	[5]
	(c)	Define – Protocol Data Unit (PDU).	[5]