



**PES University, Bangalore**  
(Established under Karnataka Act No. 16 of 2013)

**UE15CS301**

END SEMESTER ASSESSMENT (ESA) B.Tech V SEMESTER- Dec. 2017

UE15CS301- Computer Networks

Time: 3 Hrs

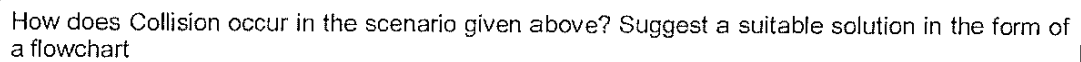
[Answer All Questions](#)

Max Marks: 100

1.	a)	Name the switching technique in which the resources needed for communication between end systems are reserved for the duration of session between end systems ,What are its salient features? Mention two types of switching techniques used in this category.	05
	b)	Name the reference (study model) model used in Computer Networks. With a neat layered diagram, mention one prominent protocol and one important functionality of each layer	10
	c)	With the help of a suitable sketch, write one line description of different pieces of Internet	05
2.	a)	Mention two types of Application architecture, with one example application each.	04
	b)	With the help of a neat diagram, give one or two lines description on application processes, sockets and underlying transport protocol	05
	c)	Consider a file having images of PESU logo(GIF), three JPEG images of faculty members of CSE and some HTML text information. Give different steps of how this file gets transferred from a HTTP client to a HTTP server ( <a href="http://www.pes.edu">www.pes.edu</a> ) using non-persistent HTTP connection. Make suitable assumptions if needed.	06
	d)	For popular applications like email, remote terminal access,web , file transfer and Internet telephony, mention the application layer protocols and their underlying transport protocols.	05
3.	a)	Mention three important services provided by the DNS, in addition to address translation, give one line description of each with an example.	06
	b)	Mention any 4 well known ports used by TCP with their port number and protocol with one line description	04
	c)	Mention six mechanisms of reliable data transfer mechanisms in TCP	06
	d)	Consider a scenario, an application process running on the server side is sending a file ESA.docx to the client side process. With the help of a suitable diagram, explain how TCP manages sender and receiver side buffer( dynamic management).	04
4.	a)	Differentiate between Distance vector routing and Link State routing algorithms with respect to the following points: <i>primary principle, learning about network,building the routing table and advertisement of updates.</i>	08
	b)	Find the error, if any, in the following IPV4 addresses a) 111.56.045.78 b)221.34.7.8.20 c)75.45.301.14 d)11101111.23.14.67	04
	c)	Compare and contrast IPV4 and IPv6 with respect to different header fields	04
	d)	Find the class of each address: a)00000001 00001011 00001011 11101111 b)11000001 10000011 00011011 11111111 c)14.23.120.8 d)252.5.15.111	04

P.T.O.

08



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|----|--|----|
| b) | Considering PES University LAN, mention 5 different building blocks  | 05 |
| c) | Why is ARP called as Plug and Play protocol? How does a host know the MAC address of the destination host, by knowing the IP address of the destination host? Explain. | 05 |
| d) | Mention any two link layer services.   | 02 |