

RAJARATA UNIVERSITY OF SRI LANKA FACULTY OF APPLIED SCIENCES

B.Sc. (General) Degree in Information and Communication Technology Second Year - Semester II Examination - February/March 2019

ICT 2406 - INTERNET PROGRAMMING

ANSWER ALL QUESTIONS

Time: Three (3) hours

1

(a) What are the characteristics of internet protocol?

(03 marks)

(b) Write the advantages a circuit-switched network has over a packet-switched network.

(04 marks)

(c) What is the purpose of DSLAM?

(03 marks)

- (d) Briefly describe following IPV4 datagram header contents.
 - i. Time to live
 - ii. Header checksum
 - iii. Type of service

(06 marks)

(e) Briefly describe four step process of DHCP.

(04 marks)

2

(a) From where do the home network computers obtain their IP addresses and from where the router gets its single IP address?

(05 marks)

(b) How does the router know the internal host which it should forward a given datagram to?

(05 marks)

(d) "Dynamic routing protocols have advantages over static routes." Discuss this statement. (e) What is the equal cost load balancing in routers? (o) marks (o) mark	(c) How do routers determine the best path? Briefly explain.	
(a) What are the differences between TCP and UDP protocols? Describe with reference to following characteristics. i. Reliability ii. Ordering iii. Speed iv. Congestion or Flow control (b) Do you agree with the statement, "There is no notion of client and server sides of a communication session for a P2P file-sharing application"? Why or why not? (c) Suppose you wanted to do a transaction from a remote client to a server as fast as possible. Would you use UDP or TCP? Why? (d) Describe main components in a URL using a suitable example. (05 marks) (05 marks) (06 marks) (07 marks) (08 marks) (09 marks) (09 marks) (09 marks) (00 marks)	(6	d) "Dynamic routing protocols have advantages over static routes." Disci	(03 marks) uss this
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5

(a) What are the other services that DNS provide in addition to the normal domain name service? Explain.

(04 marks)

(b) Elaborate the main socket-related activity of the client and server that communicate over the UDP transport service.

(06 marks)

(c) In a client server application, why is it necessary to execute server program before client program?

(04 marks)

(d) Briefly describe main multimedia applications and their categories.

(06 marks)

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