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SEVENTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE EXAMINATION, NOVEMBER 2016

CS/PTCS 09 703—INTERNET TECHNOLOGY

Time : Three Hours Maximum : 70 Marks

Part A

Answer **all** *questions.*
Each question carries 2 *marks.*

1. Define DNS. Mention its usage.
2. What is meant by multimedia networking ?
3. Differentiate between block cipher and stream cipher.
4. What is the difference between message confidentiality and message integrity ?
5. What is meant by B2B ?

(5 × 2 = 10 marks)

Part B

Answer any **four** *questions.*
Each question carries 5 *marks.*

6. Explain the working principle of Electronic Mail in the Internet environment.
7. Explain about the Best-Effort IP Service and mention its limitations.
8. Consider an 8-block cipher. How many possible input blocks does this cipher have? How many possible mappings are there ? If we view each mapping as a key, then how many possible keys does this cipher have ?
9. Explain the types of E-Commerce with an example for each.
10. Differentiate the working of TCP and UDP mechanism.
11. Explain the working of Differentiated Services.

(4 × 5 = 20 marks)

Part C

Answer **all** *questions.*
Each question carries 10 *marks.*

12. How is Socket programming done with TCP ? Explain with an example.

Or

13. Explain in detail about the working of FTP.

Turn over

14. Explain about UDP Streaming and HTTP Streaming in multimedia networking.

Or

15. Write about the working principle of the protocols used for real-time interactive applications in multimedia networking.

16. Explain in detail about message integrity and digital signatures.

Or

17. Consider RSA with $p = 5$ and $q = 11$.

    (a) What are n and z ?

    (b) Let e be 9. Why is this an acceptable choice for e ?

    (c) Find d such that $de = 1 \pmod{z}$ and $d < 160$.

    (d) Encrypt the message $m = 8$ using the key (n, e). Let c denote the corresponding ciphertext. Show all work.

    Hint : To simplify the calculations, use the fact :

    $[(a \bmod n) \bullet (b \bmod n)] \bmod n = (a \bullet b) \bmod n$.

18. Explain in detail about the trends in Supply Chain Management.

Or

19. Write in detail about the principle of operations involved in e-procurement and e-distributors.

(4 × 10 = 40 marks)