GUIDELINES:

BSc (PS) Computer Networks(BSCS06A)

Discipline SpecificElective- (DSE)Credit:06

Week	Unit	Topics	Reference book	Chapter
Week 1–2	**Unit1 - Introduction**	Introduction to data communications and networking, use of Computer Networks, classification of networks ,OSI model , function of the layers, TCP/IP	3	1.1 to 1.4
Week 3–4	**Unit2 - Network Topologies**	Bus, star,ring, mesh, tree,hybridtopologieswith their features,advantagesanddisadvantagesofeachtype. TransmissionModes:simplex, half duplexandfullduplex	2	1.1 to 1.2
Week 5-6	**Unit3 - Transmission Media**	Guided Media(Wired)(Twistedpair, CoaxialCable,Fiber Optics).Unguided Media (RadioWaves,Infrared,Micro-wave, andSatellite).	3	2.2 to 2.4
Week 7-8	**Unit4 – Data Communication and Switching Techniques**	Framing, Flowcontrol, Errorcontrol	3	3.1 to 3.4
		Circuit switching,packetswitchingmessageswitching	2	8.1 to8.3
		Routing	3	5.2 (up to 5.2.2)
Week 9-11	**Unit5 - Switching Devices**	Repeaters,switches, bridges,gateways.	1	17
		Hubs ,Routers, Multiplexing:(FDM,WDM,TDM)	2 2	17.1, 6.1
Week 12-15	**Unit6 -Internet**	Internet Service Providers (ISP), Application layer protocols:(DNS, URL, WWW,FTP, SMTP, HTTP,TELNET), web pages , introduction to HTML	1	4
		Internetaddressingsystem:IP addresswiththeirclassificationandnotation	1	21

References

1. Comer,D. E.(2015). Computer NetworksandInternet(6thedition). Pearson Publication.

2. Forouzan, B. A.(2017).Data Communications andNetworking(5thedition). McGraw Hill

3. Tanenbaum,A.S.&Wetherall, D.J.(2011) Computer Networks (5th edition), Pearson Publication

Practical Examination

4 hours, 50 marks

Breakup of 50 marks:

25 marks for continuous internal assessment (project work, assignment, lab record etc.)

25 marks for final practical exam (At least two exercises to be given)

HTML Practical

1. Write a HTML program to design a form which should allow to enter your personal data.

   (Hint: make use of text field, password field, e-mail, lists, radio buttons, checkboxes, submit button).

2. Write html code to generate following output.

   • Coffee

   • Tea

          o Black Tea

          o Green Tea

   • Milk

3. Design an html form to take the information of a customer visiting a departmental store such as name, contact phone no, preferred days of purchasing, favourite item (to be selected from a list of items), suggestions etc. One should provide button to Submit as well as Reset the form contents.

4. Design an html form to take the information of an article to be uploaded such as file path, author name, type (technical, literary, general), subject topic (to be selected from a list) etc. One should provide button to Submit as well as Reset the form contents.

5. Design an HTML document using Table related tags align the images

6. Write a HTML code to generate following output.

7. Develop static pages (using only HTML) of an online Book store.The website should consist of following pages.
   - Home page
   - Registration and user Login
   - User profile page
   - Books catalog
   - Shopping cart
   - Payment by credit card Order Conformation

NETWORK ALGORITHMS PRACTICAL LIST

1. SimulateCyclicRedundancyCheck(CRC)errordetectionalgorithmfor noisychannel.

2. Simulateandimplementstopandwaitprotocol fornoisychannel.

3. Simulateandimplementgobacknslidingwindowprotocol.

4. Simulateandimplement selectiverepeatslidingwindowprotocol.

5. Shortest Path algorithm.