计算机网络

课程论文要求与建议选题

1. 建议的报告主题见表 1。

   表 1 为建议的论文主题，不是论文题目。报告题目可以根据主题自行拟定。

2. 格式和字数：

   格式见《计算机网络课程论文模板》，字数至少 5000 字。

   请使用 MS Word 2010 或以上版本编写论文。

3. 语言

   中文、英文均可。

4. 选题

   每班每人从上述选题中各选择一个主题，**每人撰写一篇课程论文。**

   同一个班级同学的论文选题不能重复（具体由班级内部协调）。

   不同班级同学若选择的是同一主题，论文内容不得雷同，否则按作弊处理。

   可以自拟选题，但必须与授课教师沟通，由授课教师确认。

5. 参考文献

   至少 5 篇，且必须在正文中标明引用。

6. 成绩占比

   在期末最终成绩中占 10%。

7. 提交

   在截止日期前提交到乐学课程网站。

   提交截止日期：2022-05-29

   提交的论文文件命名规则：你的学号-你的姓名-你的论文题目.docx (或 .doc .pdf)

8. 论文查重

   论文会进行查重，查重结果影响最终成绩评定。

表 1　Suggested Course Paper Topics

No.	Topic
	Chapter 2　The Physical Layer
1	Passive Optical Network – PON(EPON/GPON)
2	Orthogonal Frequency Division Multiplexing - OFDM and its application to 4G
	Chapter 3　The Date Link Layer
3	PPP Password Authentication Protocol (PAP)
4	PPP Challenge Handshake Authentication Protocol (CHAP)
5	Point to Point Protocol PPP over Ethernet ---PPPoE
	Chapter 4　The MAC Sublayer
6	Spanning Tree Protocol(STP), Rapid RTP (RSTP) and/or Multiple Spanning Tree (MST)
7	IEEE802.1ad : Provider Bridges (PB)--- Q-in-Q
8	IEEE802.1ah : Provider Backbone Bridge (PBB)--- MAC-in-MAC
9	Wireless Security Protocols (WEP, WPA and WPA2/802.11i)
	Chapter 5　The Network Layer
10	Multicast OSPF--MOSPF
11	Distance Vector Multicast Routing Protocol—DVMRP
12	Ad hoc On-demand Distance Vector—AODV
13	Optimized Link State Routing Protocol--OLSR
14	Principle of ARP Spoofing and Protecting Method
15	OpenFlow-Based SDN Technologies
16	NAT Traversal Mechanisms for Peer-To-Peer Application
17	IPv6 Addressing Architecture
18	Methods for IPv4-IPv6 Transition
19	IPTV
20	Virtue Private Network
21	Multi-Protocol Label Switching (MPLS)
22	4G, 5G, and Future Mobile Communication Technologies
	Chapter 6　The Transport Layer

No.	Topic
23	TCP SYN Flooding Attacks and Common Defenses
24	New Reno Congestion Control
25	Vegas TCP Congestion Control
26	Friendly TCP Congestion Control
27	Real-time Transport Protocol/Real-time Transport Control Protocol--RTP/RTCP
28	Multipath TCP
29	Delay(Disruption) Tolerant Network—DTN
	Chapter 7 The Application Layer
30	DNS Spoofing and its Defense Scheme
31	Methods for Identifying and Filtering Junk Mail or Spam
32	Distributed Hash Table(DHT)-based P2P System
33	Dynamic Adaptive Streaming over HTTP--DASH
34	Real Time Streaming Protocol—RTSP
35	Real Time Messaging Protocol—RTMP
36	Named Date Networking—NDN
37	Information(Content)-Centric Networking—ICN/CCN
38	Application-layer multicast
39	Block-Chain Technology
	Huawei Kunpeng Cloud Topic（华为鲲鹏与云计算。强烈建议）
40	OpenEuler OS-Configuring the Network
41	OpenEuler OS-Deploy K8S Cluster
42	Network Architecture of OpenStack
43	Introduction to Huawei Kunpeng Cloud