NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWASY, JABI-ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF COMPUTER SCIENCE
2021, EXAMINATIONS₄₅₆₇₈

COURSE CODE: CIT 311
COURSE TITLE: Computer Networks
CREDIT UNIT : 3
TIME ALLOWED: 2½ HOURS
INSTRUCTION: Answer Question 1 (One) and Any Other Four (4)

1a.) What is the effect of Subnet Congestion?(*2marks*)
b) What design techniques could be employed to avoid Subnet Congestion(*3Marks*)
c) Mention design techniques that could be used in avoiding Subnet Congestion(**3 Marks**)
d) Compare the following:
   i) In–Band signal and Out–of–Band signal (*2marks*)
e) Itemize available routing protocols (*4 marks*)

f)Compare the following:
   i) *Non–adaptive* and *adaptive algorithms*.(**2marks**)
   ii) Usage Parameter Control and Network Parameter Control (**2marks**)

g) Give full meaning of the following(*7 Marks*)
  i) QoS ii) TSAP iii) UDP iv) Edu v) NPC vii) BGP **vi)** MAN

2a) What are the features of IEEE standard token ring?(*4marks*)
b.) Explain the two static routing algorithms (*6marks*)
c.)Justify the role of repeaters in internetworking (**2 marks**)

3a) Discuss the three (3) main advantages of ISDN (*6 marks*)
b) Give a functional description of any four Header parameters of Transmission Control Protocol   (*6 marks*)

4a) Give a suitable description of the TCP(*6marks*)
b) Highlight three (3) basic operations of Asynchronous Transfer Mode switch (*6 marks*)

5a.) Explain how the following standards work

(i)	IEEE standard 802.3 and Ethernet	*3 marks*
(ii)	IEEE standard 802.4 Token Bus	*3 marks*
(iii)	IEEE standard 802.5 Token Ring	*3 marks*

b.) Discuss the Session establishment related services of the session layer OSI model *(3marks)*

6a)What are the distinguishing features of the RING Topology? **(5Marks)**
b)List the typical routing protocols and their associated network operating*(7marks)*