NATIONAL OPEN UNIVERSITY OF NIGERIA
SCHOOL OF SCIENCE & TECHNOLOGY

Course Code: CIT752 ***Course Title:*** Operating Systems Concept
Instruction: *Answer Question (1) (22 marks) and any other four questions each carrying 12 marks*
Credit Units: 3 **Time:** *2½ hours*

1a) What is scheduling? ***(2 marks)***
b) Briefly describe the types of scheduling ***(8 marks)***
c).Enumerate the specific tasks perform by process scheduler stating the mechanism responsible for each task? ***(8 marks)***
d) List the important features that distinguish one network from the other ***(4 marks)***

2a) Enumerate reasons for providing an environment that allows process co-operation ***(6 marks)***
b) Operating system usually comes in two interfaces, state and describe each. ***(6 marks)***

3a) Briefly explain the three types of internetwork addresses ***(9 marks)***
b) List the different approaches to open loop ***(3 marks)***

4a) Calculate the CRC for the data polynomial $x^4 + x^2 + x + 1$ where the generator polynomial is $x^3 + 1$ ***(8 marks)***
b) What is thrashing? State two causes of thrashing. ***(4 marks)***

5a) In asynchronous communications, a typical frame for transmitting character data has four components. Enumerate them. ***(6 marks)***
b) List the components of a X.509 Certificate ***(2 marks)***
c) List the important multiplexing mechanism at the Transport Layer and explain how they are different from each other. ***(4 marks)***

6a) State any five differences between the OSI model and the TCP/IP model ***(10 marks)***
b) What is instant messaging? What are its vulnerabilities? ***(2 marks)***

7a) State the conditions under which a parent process may terminate the execution of a child process. ***(3 marks)***
b) Write short notes on Translation Lookaside buffer ***(6 marks)***
c) List the issues for co-operating processes ***(1½ marks)***
d) List the components/content of the Thread Control Block (TCB). ***(1½ marks)***