NATIONAL OPEN UNIVERSITY OF NIGERIA
University Village, 91 Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja
FACULTY OF SCIENCES
COMPUTER SCIENCE DEPARTMENT
SEPTEMBER 2020_1 EXAMINATIONS

CIT 752 – Operating System (OS) Concepts
Credit: 2 units
TIME ALLOWED: 2 Hours
INSTRUCTION: Answer Question ONE (1) and any other THREE (3) Questions

1a) Describe the basic functions of an Operating System (OS) known to you. *(10 Marks)*
b) Explain the reasons why process cooperation is important. *(8 marks)*
c) What is the primary aim of process scheduling? Outline the basic types of process scheduling known to you. *(7 marks)*

2a) Outline the basic operations carried out on files by the OS. *(5 marks)*
b) In a tabular form, compare and contrast Direct and Sequential file access respectively. *(10 marks)*

3a) Write short notes on the following: i. Segmentation ii. Cache Memory iii. Page fault. *(9 marks)*
b) Briefly discuss the basic concepts associated with Memory Partition Selection Algorithm. *(6 marks)*

4a) State the key tasks performed by the Memory Management Module of the Operating *System. (6 marks)*
b) Describe the common classes of interrupts known to you. *(4 marks)*
c) Discuss the sequence of activities that occur when an I/O device completes an I/O operation. *(5 marks)*

5a) Using the Highest Response Ratio Next (HRRN) scheduling algorithm, show (by computation) which of the following jobs will be allocated the CPU next. *(10 marks)*

Job	Waiting time (s)	Run time (s)
A	10	15
B	5	16
C	15	15

b) With respect to process management, mention any five (5) activities that the operating system is responsible for *(5 marks)*