



**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)