**OLABISI ONABANJO UNIVERSITY, AGO IWOYE.**

**FACULTY OF SCIENCE**
**DEPARTMENT OF MATHEMATICAL SCIENCES**

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| **NAME OF EXAMINATION:** | **RAIN SEMESTER, 2016/2017 SESSION** |
| **COURSE:** | **SYSTEM ANALYSIS AND DESIGN** |
| **COURSE CODE:** | **CMP 306** |
| **INSTRUCTION:** | **ANSWER ANY FOUR QUESTIONS**<br>**CALCULATOR IS NOT ALLOWED** |
| **TIME ALLOWED:** | **2HOURS** |

1a. List the steps involve in System and Analysis Design flow chart

(b) Distinguish between a couple and cohesion.

Design a structured chart using the following information

Calling Module: RECORD STUDENT GRADES

Called Module: GET ACADEMIC RECORD
GET VALID GRADES
ADD NEW GRADES
REPORT ERRORS
CHECK FOR PROBATION
CHECK FOR DEAN'S LIST

Include the required input and output couples, showing direction and meaning. In the same chart, show CHECK FOR PROBATION as a Calling Module and factor a called module called CALCULATE GPA. Show input and output couples.

2a. List and Write short note on the three test of Project Feasibility.

b. Highlight the major issues to carry out the implementation of each of the Project Feasibility.

3a. The unit price of a particular product is ₦ 18 if less than 10 are purchased, ₦16 if between 10 and 49 are purchased, and ₦15.50 if 50 or more are purchased. If the customer also has preferred customer status then the purchase is subject to a discount of 10%. Prepare a Decision Table.

b. What activities make up system design? How does system design simplify implementation?

4. Write in detail on the following terms in system analysis and design:

i. Analysis
ii. Interviewing
iii. Questionnaires
iv. Observation
v. Consistency Checking

5a When invoicing customers, the invoice clerk has to work out the discounts allowable on each other. Any order over ₦2000 attracts a "bulk" discount of $10\frac{1}{2}\%$. A customer within the trade is allowed 17%. There is also a special 8% allowed for any customer who has been ordering regularly for over 2 years.

i. Construct a decision table to illustrate the management's policy.

ii. State the possible advantages and disadvantages of using flowcharts and decision tables

6a Differentiate between analysis and design. Describe the content of a system specification.

b. Distinguish between implementation and changeover. Describe the various methods of changeover.

c. How would an analysis determine the user's needs for a system?