

**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS**

**SCHOOL OF SCIENCE AND TECHNOLOGY**

**JUNE/JULY EXAMINATION**

**COURSE CODE: CHM304**

**COURSE TITLE: COLOUR CHEMISTRY AND TECHNOLOGY**

**TIME ALLOWED:2hrs**

**INSTRUCTION: Six questions to answer four (each question carriers a total** 17marks)

**Question 1**

a) Explain briefly the term colour perception( 5marks)

b) Differentiate between additive and subtractive primary colours ( 5marks)

c) Write short notes on the following:

i) Secondarycolours ii) primarycolour( 5marks)

d) What do you understand by the word pigments? (2marks)

**Question 2**

1. Define the following terms:
2. Polymerization ii) Mordant(7marks)

b) Discuss five types of mordant and their features( 5marks)

c) Explain the term polymer fiber, give two examples( 5marks)

**Question 3**

a) What is meant by primary colour? (3marks)

b) Enumerate and discuss the industrial classification of dyes. (8 marks)

c) State six limitation of natural pigment (6 marks)

**Question 4**

a) Enumerate five categories of organic pigments( 5marks)

b) Discuss briefly five features of organic pigments(7marks)

c) What are auxochromes? Mention two kinds of auxochrome ( 5marks)

**Question 5**

a) Differentiate between organic and inorganic pigments ( 6marks)

b) List and discuss four applications of pigments (6marks)

c) Enumerate the specific role of a mordant in the dyeing process. ( 5marks)

**Question 6**

a) Define the term dye and give two examples ( 5marks) b) Discuss briefly the following

i) Types of Jig Dyeing Machine (4marks)

ii) Features of Hag Dyeing Machine (4 marks)

iii) Advantages of Overflow Dyeing Machine (4 marks)