



NATIONAL OPEN UNIVERSITY OF NIGERIA

Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja

Faculty of Science

DEPARTMENT OF PURE AND APPLIED SCIENCES

JULY, 2017 EXAMINATIONS

COURSE CODE: CHM 304

CREDIT UNIT: 2

COURSE TITLE: COLOUR CHEMISTRY AND TECHNOLOGY

TIME: 2 HRS

INSTRUCTION: Answer question 1 and any other 3 questions

1. (a) Mention the Technical features of Multi Nozzle Soft Flow Dyeing Machine 4mks
(b) What are Mineral fibres ? 6mks
(c) Briefly explain what Colour modifiers are and state what happens when no or different methyl groups are added to Pararosanil dye? 8mks
(d) With the aid of structural formula only distinguish between the two forms of Betalain Pigments. 7mks

2. (a) Arrange the colours of a pure spectrum in order of increasing wavelength 3mks
(b) In tabular form state the different types of Zinc pigments and their application. 6mks
(c) Why are objects the colour they are? 6mks

3. (a) In what ways are Aluminium pigments preferably applied? 3 ½ mks
(b) With appropriate examples write short notes on
I. Subtractive secondary colours. 3mks
II. Additive secondary colours. 3mks
(c) Write the typical structure of a cationic direct dye? 5 ½ mks

4. (a) What are the limitations of Inorganic Pigments? 3 ½ mks
(b) Explain briefly in each case the application of the different forms of pigment in Ceramic Industry 7 ½ mks
(c) Define the following, Polyurethane, Cellulose and Polyacrylonitrile 4mks

5. (a) Discuss in detail the various application of luminescent pigments in security printing. 11 ½ mks
(b) Write the structural formula of a cis-amide 3 ½ mks