

PRINTING CRAFT PRACTISE

EXAMINATION SCHEME

The examination shall comprise three compulsory papers, Papers 1, 2 and 3; all of which should be taken. Papers 1 and 2 shall be composite and will be taken at one sitting.

Paper 1 This shall consist of forty multiple choice questions for candidates to answer within 45 minutes for 40 marks.

Paper 2 This shall consist of five essay type questions for candidates to answer four for 15 marks each. The paper shall take 1½ hours.

Paper 3 Shall be a practical paper of 1 hour duration. It shall consist of two questions for candidate to answer one for 100 marks.
A list of materials shall be available to schools, not less than two weeks before the paper, for procurement and preparation for the examination. Candidate shall be expected to write a project validation report, on the day of the paper, to be submitted along with the project work.

Alternatively, Council may consider assessing candidates using the alternative to practical work testing method, in the event of constraints of requisite facilities. For this, there shall be two sets of written questions for candidate to answer one for 100 marks for 1 hour. These shall test candidate's real time experience in the workshop on safety, use of tools and machines, marking out, colour separation, processing jobs to specification, sequence of operation, etc.

DETAILED SYLLABUS

S/NO.	CONTENT	NOTES
1	Introduction to the Art of Printing	(i) Art of Definition, explanation of printing. (ii) Importance, products advantages and uses. (iii) Printing in Nigeria-Survey Press,Federal Government Press,RailwayPress,Daily Times and other Press Houses. (iv) Copyright law,History - Origin,Chinese,Johan Gutenberg.The role of Hope Waddel and Henry Townsend (1846 – 1926) and (1926 – 1960). (v) Printing and Career – Importance, Careers, e.g. Lithography machine minders, etc. (vi) Printing Processes, description materials/tools/equipment – letter press/relief printing; offset/lithography; Gravure/intaglio,

		screen, stencil/flexography.
2	Workshop safety and maintenance	<ul style="list-style-type: none"> (i) Technical workshops for printing – types e.g. lithography and machine room. (ii) Safety in the workshop – precautions, air-condition, electrical and lightings, dark rooms, machine rooms. (iii) Safety in the Binding and Print finishing, safety in the hot metal composition room. (iv) Maintenance of machines, tools and equipment in the Printing workshop, Enumerate the procedures.
3	<p>Letter Assembly</p> <p>(a) Hand Composition</p> <p>(b) Design for Printing</p> <p>(c) Mechanical Composition</p> <p>(d) Photo-composition</p>	<p>Identification e.g. Tools and facilities. Explanation in simple Principles and terminologies, techniques, structures and parts of types. Identification of type faces and typography.</p> <p>The concepts of basic design and instrument.</p> <p>Description and listing of differences between monotype and linotype; accessories and their uses.</p> <ul style="list-style-type: none"> (i) Equipment/tools, accessories. (ii) Meaning: principles and components (iii) Advantages.
4	<p>(a) Print Finishing</p> <p>(b) Binding materials, tools and equipment</p> <p>(c) Binding</p> <p>(d) Pamphlet</p> <p>(e) Perfect binding</p>	<ul style="list-style-type: none"> (i) Meaning, importance, etc (ii) Types and processes e.g. Edition case binding and loose leaves. (iii) Technical Terms. (iv) Materials and accessories. <ul style="list-style-type: none"> (i) Materials – e.g. sewing- thread and leathers. (ii) Bone-folders and guillotine. (iii) Papers and boards. <ul style="list-style-type: none"> (i) Types: book, pamphlet, padding, edition case, loose – sheet, perfect binding. (ii) Processes. <p>Importance, explanation, description and processes, e.g. cutting, stitching, etc.</p> <p>Concept, importance and processes.</p>

	<p>(f) Edition binding</p> <p>(g) Loose sheet binding</p> <p>(h) Warehouse</p>	<p>Differences between perfect binding and other types.</p> <p>Explanation. Edition binding materials and their usages. Distinguish between edition binding and others.</p> <p>Description, operational outline and materials, tools and equipment.</p> <p>(i) Define warehouse. (ii) Identification and uses of types of printing materials e.g. paper and board, ink, chemicals, printing surfaces, sizes, substances, grammage etc. (iii) Stock and inventory control.</p>
5	<p>Screen printing</p> <p>(1) Frame/stencil making</p>	<p>(i) Origin of screen printing (ii) Preparation and methods - wooden frame, mesh (silk), hand-made stencil with card board; stencil using block out method. (iii) Stretching of the mesh on the frame. (iv) Materials and tools – frame mesh, shoulder joint, glue and nails, squeegee, wax, paint, sponge, cardboard, oil base or water free ink.</p>
	<p>(a) Print</p> <p>(b) Photographic screen making</p>	<p>Making print using stencil with attention on registration marks and different colours.</p> <p>(i) Coating of the screen with sensitized solution. (ii) Exposure of the screen with the gelatin solution in suitable source of light and development with water. (iii) Identification and uses of the following materials – silk or organdie gelatin coating, dichromate, positive image, board light source, tracing paper, black light source, tracing paper, black paint (Opaque).</p>
	<p>(c) Image Reproduction</p>	<p>(i) Transferring of image from the mesh/stencil to the substrate, e.g. paper, sticker, plastic, etc. (ii) The use of enlarger and Kodak lith translucent printing paper.</p>
6	Lithography – Process Camera Work	Preparation, interpretation and uses.

7	Machine Printing (i) Offset Machine Printing	(i) Techniques of offset printing (ii) Spare parts and maintenance procedures e.g. lubrication, bearings, rollers setting, etc. (iii) Brief history of offset lithographic machine. (iv) Configuration of lithographic machine. (v) Plate and adjustment in correcting image position on the sheet during the printing process. (vi) Functions of the important parts of the press and its running. (vii) Major units of a lithographic printing machine and their functions.
	(ii) Relief Printing (iii) Gravure Printing (Intaglio) (iv) Flexographic Printing	(i) History; explanation; principles and types of relief printing. (ii) Important parts and maintenance. (iii) Method and schemes of imposition. (iv) Types of image carrier. (v) Tools and Materials- Chase, Quoin, Solvents, Oils, etc. (i) History, explanation, principles and types of Gravure Image Carrier. (ii) Products and advantages/disadvantages. (i) Definition and concept of flexography and its image carrier. (ii) Differences between flexography printing and other machine printing. (iii) The importance of flexographic printing to packaging industry e.g. cellophane and pharmaceutical industry. (iv) Products- cellophane bags, pharmaceutical and food packing products.
8	Legal Aspects of the Printing Industry	(i) Trade houses in the printing industry and their activities e.g. Employers Association; Professional Bodies, Training Institutions, Examination Bodies and other Foreign Trade House. (ii) Copyright

LIST OF FACILITIES AND MAJOR EQUIPMENT/MATERIALS REQUIRED

ITEM NO	EQUIPMENT	QUANTITY REQUIRED
1.	Vacuum Frame	2
2.	Table	4
3.	Screen mesh stretcher	5
4.	Gullotine	1
5.	Magnifier	10
6.	Squeege	20
7.	Stencil knife	10
8.	Compass cutter	2
9.	Drying Rack (Cabinet)	1
10.	Light table	4
11.	Pallet	2
12.	Register scope	1
13.	Destometer	1
14.	Type scale	1
15.	Printing down frame	1
16.	Small offset machine	1
17.	A set of Computer	1
18.	Scanner and Printer	1 each
19.	Giant stapler	2

SUGGESTED READING LIST

S/N	TITTLE	AUTHOR
1	Printing Technology	Adams Faux
2	Comprehensive Graphic Art	Dr Ervin A, Denis Dr John D, Jenkins
3	Screen Printing Techniques	Albert Kosloff M,A
4	An Approach to Printing Management	Soji Adeniyani
5	Graphic Communication in Nigeria	Abdul Rasheed Afolabi