

NATIONAL EXAMINATIONS COUNCIL
(NECO)

BASIC EDUCATION CERTIFICATE
EXAMINATION
(BECE)

SYLLABUS

FOR CANDIDATES IN UPPER BASIC
(JSS1-3) IN NIGERIA UNDER THE
UNIVERSAL BASIC EDUCATION (UBE)
PROGRAMME.

BECE

SECOND EDITION

BASIC TECHNOLOGY

JSS TWO

1. FIRST AID

- a) First aid: Meaning and materials
- b) Application of simple first aid
- c) ABC of first aid:
 - i. Air ways,
 - ii. Bleeding and breaks
 - iii. Circulation (pulses)
- d) Application of ABC of first aid

2. RESCUE OPERATION

- a. Meaning of rescue operation
- b. Different aspects of rescue operations
- c. Securing the environment, vehicle and victim(s)
- d. Steps involved in rescue operation

3. MATERIALS AND THEIR COMMON USES

- a. Wood: furniture, building construction, handles of implements, etc.
- b. Metals: household utensils, vehicle and ship parts etc.
- c. Brass: Decorations
- d. Bronze: Carving statues, ornaments, etc.
- e. Ceramics: tiles, household utensils, etc.
- f. Rubber: tyres and tubes, foot wears, etc.
- g. Plastic: plastic buckets and bottles, etc.

4. GEOMETRICAL CONSTRUCTION

- a. Circle:
 - I. Parts of a circle (diameter, radius, chord, sector, quadrant, circumference, etc)
 - II. Circle drawing, use of set squares, Tee square and compasses to divide a circle into 4, 8, and 12 equal parts
 - III. Construction of tangent and normal to a circle: tangent at point outside the circle and to one or two equal circles
- b. Triangles:
 - I. Right angled, equilateral, isosceles and scalene triangles
 - II. Inscribed and circumscribed circles to given triangles

c. Polygons:

- I. Definition and construction of regular and irregular polygon: pentagon, hexagon, heptagon, octagon, using general and specific methods, etc.

5. PLANE FIGURES

- a. Examples of plane figures
- b. Construction of plane figures
- c. Determination of areas of regular plane figures, e.g., triangle and rectangle of equal areas, square and rectangle of equal areas, etc.
- d. Enlargement and reduction of plane figures: triangle, rectangle and squares in given ratios by (i) length of side and (ii) radial line method

6. METAL WORK MACHINES

- a. Types of metal work machines
- b. Functions of the different types of machines
- c. Care and maintenance of metal work machines

7. WOOD WORK MACHINES

- a. Types and uses:
 - I. Portable power tools e.g., belt sander, hand drill, fret saw, etc.
 - II. Machines, e.g., circular saw, band saw, wood lathe, surface planer, thicknesser, sander, drill, etc.
- b. Functions of the different types of machines
- c. Care and maintenance of wood work machines

8. BELT AND CHAIN DRIVES

- a. Examples of belts and chain drives
- b. Application of belt and chain drives
- c. Advantages and disadvantages of belts and chain drives

9. HYDRAULIC AND PNEUMATIC MACHINES

- a. Examples of hydraulic and pneumatic devices
- b. Components of the machines
- c. Operation and uses

10. GEARS

- a. Types of gears: internal gear, external gear and bevel gear
- b. Uses of gears:
 - i. Power transmission
 - ii. Changing direction

- iii. Selecting speed
- c. Gear ratios and speed of rotation
- d. Functions of lubricants in gears