

# SS TWO

## GENERAL MATHEMATICS

1. Read the following topics
  - a. Logarithms and standard form
  - b. Quadratic equations
  - c. Simultaneous Equations (one linear, one quadratic)
  - d. Algebraic fractions
  - e. Linear Inequalities.
  
- 2a. Use logarithm table to evaluate:
  - i.  $\left(\frac{0.00967}{0.07812}\right)^{\frac{1}{2}}$
  - ii.  $\sqrt[5]{0.000907}$
  - iii.  $\sqrt[4]{287.6^2 - 120.6^2}$
  
- b. Find the unknown in the following equations:
  - i.  $\log_x 216 = 3$
  - ii.  $\log_{10} 0.001 = x$
  - iii.  $y^3 = \log_{10} 100000000$
  - iv.  $k^2 = \log_2 512$
  
- c. Use logarithm tables to evaluate the following:  
If  $P = \frac{m \sqrt{2ghT}}{\sqrt{0.03D}}$   
where  $g = 9.8$ ,  $D = 180$ ,  $m = 3$ ,  $h = 0.834$ ,  $T = 0.265$ , find  $P$ .
  
- d.
  - i. Given that  $\log_{10} 5 = 0.699$  and  $\log_{10} 3 = 0.477$ , find  $\log_{10} 45$  without using mathematical tables.
  - ii. Hence, solve  $x^{0.8265} = 45$
  
- e.
  - i. Simplify without using Mathematical tables,  $\sqrt{\frac{P}{Q}}$   
where  $P = 3.6 \times 10^{-3}$  and  $Q = 2.25 \times 10^6$ , leaving your answer in standard form.
  - ii. Given that  $\frac{x}{y} = \frac{2}{7}$ , evaluate  $\frac{7x+y}{x-\frac{1}{7}y}$
  - iii. If  $x = \frac{2a+3}{3a-2}$ , express  $\frac{x-1}{2x+1}$  in terms of  $a$ .
  
- f.
  - i. Simplify  $\frac{(x+1)(x-2) - (x-1)(x+4)}{2x-1}$
  - ii. If  $k$  is a constant not equal to zero, find the value(s) of  $x$  for which the expression

$$\frac{k}{x} + \frac{b}{x-3} + \frac{c}{x(x-3)} \text{ is not defined.}$$

- iii. If  $x$  is not equal to any of the values obtained in (ii) above, find the value of  $k$  such that  $\frac{k}{x} + \frac{2}{x-3} - \frac{6}{x(x-3)} = 0$ .

**NB: Write all solution in a new exercise book.**

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### **ENGLISH LANGUAGE**

- 1a. What is a sentence?
  - b. Give the functional sentence types
  - c. Give the structural sentence types
  
  - 2a. Give ten idiomatic expressions and use each of them in sentences
  - b. Differentiate with two examples each, Nigerian English and British Standard English
  
  - 3a. What is a finite and a non finite verb
  - b. Give two examples each.
  
  - 4a. Differentiate between a phrase and a clause.
  - b. Give the functions of Noun Phrase
  
  - 5a. What is an informal letter?
  - b. Give five features of an informal letter.
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### **FURTHER MATHEMATICS**

Study carefully the following topics and solve examples in each:

1. COORDINATE GEOMETRY (THE STRAIGHT LINE)
  - \* The Cartesian coordinates
  - \* Distances between two points
  - \* The midpoint of a line segment
  - \* Division of a line in a given ratio
  - \* Angle between two lines and gradient of a line
  - \* Equation of a straight line

2. VECTOR 1

- \* Scalars and vectors
- \* Addition and subtraction of vectors
- \* Multiplication of vectors by a scalar
- \* Position vectors
- \* Modulus and Unit vector in terms of its components

Answer the following questions:

1. The vertices of a parallelogram PQRS are P (a,7), Q (7,5), R (0,4) and S (6, 2)
  - a. Calculate (i) the gradient of PQ.  
- 6-  
(ii) the gradient of SR.  
(iii) the value of a.
  - b. Find (i) |PR|, correct to 1 d.p.  
(ii) the equation of SQ.
2. Find the resultant of the vectors  $\vec{AC}$ ,  $3\vec{BC}$ ,  $3\vec{CD}$ , and  $\vec{DA}$ .
3. The position vectors of the points A, B, C, D relative to an origin O are respectively a, b, c, and d. Find the following vectors in terms of a, b, c, and d.  
i.  $\vec{AC}$  ii.  $\vec{AD}$  iii.  $\vec{AB} + \vec{CA}$  iv.  $\vec{BC}$  v.  $\vec{BD}$  vi.  $\vec{CD}$  vii.  $\vec{BC} + \vec{CD}$  viii.  $\vec{BC} + \vec{BD}$  ix.  $\vec{AC} + \vec{BC}$
4. If  $\vec{OP} = \begin{pmatrix} 2 \\ 3 \end{pmatrix}$ ,  $\vec{OQ} = \begin{pmatrix} -4 \\ 5 \end{pmatrix}$ ,  $\vec{OR} = \begin{pmatrix} 7 \\ -1 \end{pmatrix}$ , find: i.  $\vec{QP}$  ii.  $\vec{RP}$  iii.  $\vec{RQ}$

**MATHEMATICS 2**

Study the following topics carefully:

1. SEQUENCES AND SERIES

- Exponential Sequence (G.P) – nth term
- Sum of terms in a G.P
- Sum to infinity

2. TRIGONOMETRIC RATIOS OF THE GENERAL ANGLE, GRAPH AND IDENTITIES

- Basic trigonometric ratio and its reciprocal ratios
- Trigonometric ratios of the general angle 0° to 360°
- Trigonometric ratios of the special angles
- Trigonometric graph, Identities and equations

ANSWER THESE QUESTIONS

1. Given that 4, 12, x, y, 324, 972, ... is a geometric sequence, find the sum of x and y.

2. Given that  $\sin \theta = \frac{8}{17}$ ,  $0^\circ \leq \theta \leq 90^\circ$  find the values of:

a.  $\cos \theta$    b.  $\frac{\cos \theta - \sin \theta}{\sin^2 \theta}$    c.  $\frac{\cos \theta - \sin \theta}{2 \tan \theta}$

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## **PHYSICS**

1. Read vector quantity, vector resolution and vector in I, o and k directions
  - a. Resolve vectors inclined at obtuse and acute angles using cosine and sine rules
2. Read Equilibrium of forces
  - i. State conditions for the equilibrium of coplanar forces
  - ii. Read moment of forces and couple.

N.B Make a short note on each topic listed above and solve some problems to reflect your understanding

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## **HEMISTRY**

- 1a. Read and study carefully, the following topics
  - i. Definition of carbon
  - ii. Allotropes of carbon
  - iii. Destructive distillation of coke
  - iv. Gasification of coke
  - v. Compounds of carbon
    - carbon (iv) oxides
    - carbon (v) oxides
    - Trioxo carbonates iv compounds
- b. Answer the objective questions at the end of the topic using essential chemistry for Senior Secondary schools by I.A. Odesian on A New School Chemistry by Ababio

## **YORUBA**

Daruko orisa ile Yoruba meje pelu ounje okookan won.

**FIHERY**

- 1. Study the following topics:
    - a. Fish pond construction and management
    - b. types of fish ponds
    - c. water qualities
- .....
- .....

**AGRIC SCIENCE**

- 1. Roles of governmental and non – governmental organizations in Agricultural development
  - 2. Land tenure systems
  - 3. Land use Acts
  - 4. Forest management techniques
  - 5. Agro – forestry
- .....
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**ECONOMICS**

Study the following topics and practice the questions that follow each

- 1. Meaning of financial institution
  - 2. Money: Meaning, characteristics and functions
  - 3. Channels of distribution
- .....

**DATA PROCESSING**

Read and study the following topic.

- 1. Web Design Packages
  - 2. Presentation Package
  - 3. Graphic packages
- .....
- .....

**BIOLOGY**

Study the following topics

- i. Cell and its environment
- ii. Digestive system and mechanism
- iii. Relevance of Biology in Agriculture

## **CIVIC EDUCATION**

1. Define Naturalization
  2. State the conditions of becoming a citizen in Nigeria
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## **C.R.K**

1. Read “The birth of Jesus Christ and mention two people that played important parts concerning His birth.
  2. Read “The baptism of Jesus” and mention two signs of its baptism.
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## **ELECTRONICS**

With the aid of relevant ebooks, study vigorously the following topics:

1. Basic Electronic Theory
    - Magnet and magnetic field
    - Electromagnetism
  2. Thermionic Devices
    - Electron emission (Photoemission, thermionic emission, electric field emission, secondary emission)
    - Thermionic devices (thermionic diode, triode, tetrode, beam power tube, cathode ray tube)
  3. Semiconductor Devices
    - Types of semiconductor
    - Covalent bonding in semiconductors
    - Extrinsic semiconductors (p-type, n-type)
    - Doping of intrinsic semiconductors
    - Current-voltage characteristic of a p-n diode.
    - Specifications of p-n diodes
- .....

## **TECHNICAL DRAWING**

Study vigorously the following topics:

1. Geometrical Constructions
  - Polygons
  - Scales (plain, diagonal)
  - Enlargement and reduction of figures
  - Equal areas of similar figures
  - Tangents and tangency
  - Special curves (ellipse, parabola, hyperbola, etc)
2. Development of Geometrical solids
  - True lengths
  - Surface development
3. Pictorial Drawing
  - Dimensioning techniques
  - Isometric drawing
  - Oblique drawing
  - Introduction to computer graphics

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## **GOVERNMENT**

Study the following topics and answer relevant question using the school recommended textbook as a guide.

1. Pre – colonial Administration
2. Public Enterprises
3. Civil service
4. Definition of the term Government

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## **HISTORY**

Study the following topics and answer relevant questions using the school recommended textbook as a guide

1. The British annexation of Nigeria
2. First and second phase of the conquer of Nigeria by the British

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## **CCP**

Read food commodities

- i. Food value
- ii. Storage
- iii. Methods and effect of cooking

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## **HOME MANAGEMENT**

Read food purchasing

- i. Factors and guidelines for purchasing food
- ii. Food preservation, meaning and reasons for preserving food.

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## **LITERATURE**

Read and study the following texts:

1. Second Class Citizen by Buchi Enecheta
2. Invisible Man by Ralph Ellison

## **COMPUTER STUDIES**

Study carefully the following topics and solve examples in each:

1. Computer Software
2. Application Software and Operating System Software

