FURTHER MATHEMATICS, SS2 HOME STUDY GUIDE

Coordinating Teacher: Mbavetircha John T (07066880460)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| WEEKS | TOPIC | CONTENT | BEHAVIOURAL OBJECTIVES | PRACTICE QUESTIONS |
| 1 | SET THEORY | i.Definition of set, finite set,subset,superset and equality of set  ii. Stating universal set, unit set and empty set  iii. Definition of union of set ,intersection of set and compliment of set  iv. Stating classification involving two set  v. Stating venn diagram | -define sets  -state the universal set  -solve union and intersection of sets  -apply venn diagrams to intersecting sets | 1. If A=  B= . Evaluate  (a)A n B (b) AuB  2. In a class of 22, 12 take Econs, 8 take Govt, 7 take Chem. Nobody takes Econs and Chem and 4 take Econs and Govt. How many students take both Chem and Govt?  3. Prove that for sets A, X and D that Xu(AnD)=(XuA)n(XuD) |
| 2 | BINOMIAL EXPANSION | |  | | --- | | i. Stating Pascal triangle  ii. Application of Pascal’s triangle  iii. State Binomial expansion formula  iv.Application of Binomial expansion formula | | -state the binomial theorem  -apply the binomial rule | 1 Expand using Binomial  2 What is the coefficient of y in |
| 3 | Permutation | Definition of Permutation  ii. Cyclic permutation  iii. Condition of permutation  iv. Definition of combination  v. Application of combination | -define and identify the conditions of permutation  -applications of permutation | 1.Simplify  2. In how many ways can 5 men be selected out of 9 men and 10 women?  3. In how many ways can sticks be arranged in a row? |
| 4 | MAPPING | I. Definition Of Mapping  Ii.Function  Iii.One-One Mapping  Iv.Onto Mapping  v. Graphical representation of mapping | Define a map, functions and their transformations | 1 .what is the range of a quadratic function of root equal to 2  2 . Prove that all members of a range are in the domain but not all domain is range  3.Differentiate between the range of a quadratic function and its domain with examples |