



ON METHODS OF CONSTRUCTION OF SEMIREGULAR AND REGULAR GROUP DIVISIBLE DESIGNS

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Abstract

Group Divisible design is the simplest among the partially balanced incomplete block design with analysis point of view. Considering the fact, we have constructed Group Divisible design using difference set for a BIB design and symmetrical balanced incomplete block design. Here, we have also shown that RGD design at serial number 5, 7, 8 of Corollary 5.3 of Dey (1986) can also be obtained from theorems 2.1 & 2.2 discussed in this investigation. Moreover, we also constructed 11 more RGD and Semi RGD design in the range of $4 \leq r, k \leq 28$.

Key words : Symmetrical BIB design, Association Scheme, Group divisible design, Galois field.