The meaning of personality as formulated for this particular study has been discussed in Chapter - 2. Methods of personality measurement are many [Allport (2)]. Krech & Crutchfield (62) for convenience of discussion classified these methods as performance tests, personality inventories, projective techniques, situational tests and ratings. The principal approach to personality measurement is through personality inventories, which are aimed at a great variety of traits. A personality inventory is "a check-list usually to be filled out by a person about himself, consisting of (a) many statements about personal characteristics which the subject checks as applying or not to the ratee or (b) of question to be answered yes, No or Doubtful" [English & English (24, p.383)].

The inventory constructed by the present researcher consists of statements, each of which is to be answered in one of several specified categories (expressing the frequency of occurrence), such as 'Always', 'Frequently', 'Sometimes', 'Usually not' and 'Never'. This inventory is in Bengali and is meant for boys belonging to age-group 15-17 years. It is
constructed by the summated rating technique as propounded by
Likert (66). It covers the introversion-extroversion trait of
personality. English & English (24 p. 276) defines the trait
introversion as "a turning inward upon oneself. The followings
are listed among the chief manifestations of the turning inward
a tendency to shrink from social contacts, preoccupation with
one's own thought". Extraversion has been defined by English &
English (24 p. 197) "a turning outward", "an attitude of interest
in things outside oneself, in the physical and social environment,
rather than in one's own thoughts and feelings.

Before framing the items of the inventory the
following inventories were gone through: (1) Bernreuter's
Personality Inventory (10), (2) Eysenck's Short Questionnaire
for the measurement of two dimensions of personality (22).

Preliminary Item Selection:

At first 42 items were framed for the trait men-
tioned above. In the framing of items help was taken from survey
of appropriate literature, from different tests of personality
In the phrasing of items suggestions given by Symonds (102),
Cantril (14), Goode & Halt (39), Edwards (22), Goodenough (40),
Harper (46) were taken into consideration. The statements thus
framed were edited with the help of a number of teachers and
research scholars of the Department of Psychology of Calcutta
University. In the process of editing the number of items were
reduced to 34. Then the inventory with 34 items was submitted to
25 judges along with the definition of the trait concerned. The
judges include University teachers of Psychology and other Social Sciences. The judges were asked to judge the adequacy of different items under that variable. Twenty-three items (1-6, 11-14, 18-19, 21-22, 25-28, 30, 33, 37, 40-41) on which there were cent percent agreement among the judges were selected for the inventory. The inventory comprising of 23 items was given to an experimental group consisting of 100 boys. This pilot study was done to test whether there was any ambiguity in any of the items. Then the items of the inventory were again modified. Some of the items were omitted on the basis of this preliminary try-out. Thus the number of items of the inventory remained 23.

**Scoring weights:**

There are different methods by which we can assign weights to the responses of different items of an inventory. Ferguson (29) discussed in detail about three different methods for the assignment of scores to the alternative responses of an item. They are known as (1) an arbitrary weighting method, (2) a standard score weighting method and (3) a sigma-deviate weighting method. The first and the third methods were suggested by Likert (66) while the second method was suggested by Rundquist & Sletto (In Ferguson (29)). Among these three methods the arbitrary weighting method is most widely used. It is very easy to compute and also time-saving. Moreover Likert (66) noted after computation of a large number of sigma-deviate values that these did not differ much from the values resulted by arbitrary weighting.
method. To quote Ferguson (29, p. 131) "scores resulting from these weights correlate .99 with scores based upon the sigma-deviate method". The present researcher used the arbitrary weights of 1, 2, 3, 4 & 5 in assigning weights to the alternative five responses of each item for the reasons mentioned above. The standard score weighting method was discarded for its complexity of computation. For the present inventory, highest score was allotted for the most extroverted response of each item and lowest score for the most introverted response of each item. The remaining scores that is 4, 3, and 2 were put on the responses that lied in between the extreme extroverted and extreme introverted responses of each item.

**Item-analysis:**

There are different techniques of item-analysis. Anastasi (2) usually in item-analysis either the difficulty value or the discriminating value of each item is found out. Difficulty values of different items are determined only when the test in question is a speed test. But when the test is a power test then discriminating values of the items are determined. The present inventory, though is a power test, yet the discriminating values of the items were not determined as a large number of subjects belonging to the two known extreme groups, was not easily available. So the items were selected on the basis of item-total correlation, which is also a method of item selection (Likert 66). The object of item-analysis on the basis of item-total correlation is to determine how well the items under each variable correlate with the total score of that variable. According to Vernon (105, p. 239) "the standard procedure in choosing items for the
for the final form of the test is to retain those which correlate well with the total score on that variable which they are supposed to measure. Anastasi (3, p.169) also states that 'item-analysis is frequently conducted against total score on the test itself'. This procedure of item-analysis gives a measure of internal consistency of the test. Items that show low correlation with the total score of variable are rejected and the items which show high correlation with the total score of the variable are retained in the final form of the test.

The inventory consisting of 23 items were administered on 200 randomly selected subjects. For each item the item-total correlation was determined by the Pearson-product moment formula. The items which showed high correlation with the total score were retained, and the rest were omitted from the inventory. The number of items retained on the basis of item-total correlation was 20. The item-total coefficients of correlation are given in Table - II, (p.27). So the final form of the inventory consists of 20 items only. The three items (Item Nos. 2, 7, 23) were rejected.

Reliability:

There are three fundamental approaches that are usually followed for the estimation of reliability of a scale. Mursell (74), Freeman (31), Lindquist (67), Guilford (43), Anastasi (3), Cronbach (19), Nunnally (76). The comparative merits and demerits of these
### TABLE - II

Item-total correlation values of the Personality Inventory

\( N = 200 \)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>( r )</th>
<th>Original Item No.</th>
<th>Item No.</th>
<th>( r )</th>
<th>Original Item No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.70</td>
<td>1</td>
<td>12</td>
<td>.74</td>
<td>14</td>
</tr>
<tr>
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<td>.45</td>
<td>37</td>
<td>13</td>
<td>.69</td>
<td>13</td>
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<tr>
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<td>2</td>
<td>14</td>
<td>.70</td>
<td>19</td>
</tr>
<tr>
<td>4</td>
<td>.69</td>
<td>3</td>
<td>15</td>
<td>.70</td>
<td>21</td>
</tr>
<tr>
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<td>.74</td>
<td>4</td>
<td>16</td>
<td>.72</td>
<td>22</td>
</tr>
<tr>
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<td>5</td>
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<td>40</td>
<td>18</td>
<td>.70</td>
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<tr>
<td>8</td>
<td>.30</td>
<td>6</td>
<td>19</td>
<td>.69</td>
<td>27</td>
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<tr>
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<td>.71</td>
<td>11</td>
<td>20</td>
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<td>23</td>
</tr>
<tr>
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<td>.79</td>
<td>30</td>
</tr>
<tr>
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<td>.78</td>
<td>13</td>
<td>22</td>
<td>.75</td>
<td>33</td>
</tr>
</tbody>
</table>

23 .49 41

All the values are significant at .01 level.
different techniques have been discussed by the authors mentioned above. The reliability of this inventory has been found out by retest method. The inventory was administered twice on a sample of 100 boys at an interval of six weeks. The reliability coefficient has been found to be .87 and this value is significant at .01 level.

Validity:

The validity of a test can be determined only in terms of some criterion. All methods that are employed to estimate the validity of a test are concerned with the relationships between performance and other independently observable facts about the behavior characteristics under consideration. That techniques that are followed to find these relationships are many. But the APA Technical Recommendations grouped them into four different categories [Anastasi (3)]. Detailed discussion of these different methods of determining validity has been done by Cronbach (19), Anastasi (3), Nunnally (76). The validity of the present inventory has been found out with the Bengali version of Eysenck's short questionnaire (28) for the measurement of two dimensions of personality. This inventory and Eysenck's one have been applied on a sample of 100 subjects. The coefficient of correlation between the two scores gives the validity coefficient of the present inventory. The validity coefficient of this inventory has been found to be .32 and it is significant at .01 level.