Chapter 3

Methodology
The present study "Academic performance of undergraduate students in relation to socio-psychological factors and vocational interest" has been done with a view to find out socio-psychological factors (Personality factors) and vocational interests of the undergraduate students on the basis of their academic performance. For ascertaining the academic performance 'Adult Education Achievement Test' constructed by V. Malaiya, K.C. Malaiya and L.N. Dubey was administered on 200 boys and 200 girls. On the basis of obtained score on this test the high achievers and low achievers were selected in both the groups of boys and girls. 50 high achievers and 50 low achievers comprising the total of 100 each in both the groups, the subjects were taken for the present study on whom the other tests were administered. The subjects who were treated as sample of this study were taken from the different colleges of Handia. The age range of the boys and girls was 17 to 22 yrs. Subjects were matched with their age, education and socio-economic status.
Table No. 1

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Groups</th>
<th>High Achievers</th>
<th>Low Achievers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td></td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

As per the design of the sample (Table No. 1) the subjects were administered the tests to collect data for assessing the factors related with the academic performance. By collected data the hypothesis were tested.

**Hypothesis -**

1. Higher academic Achiever must be different significantly than the low academic achievers on 16 P.F. Test among boys.

2. Higher academic Achievers must be different significantly than the low academic achievers on 16 P.F. Test among girls.

3. Higher academic achievers (boys) must differ significantly than those Higher academic achievers
(girls) on 16 P.F. Test.

(4) Low academic achievers (boys) must differ significantly than those lower academic achievers (girls) on 16 P.F. Test.

(5) Higher academic achiever must be different significantly than the low academic achievers on Vocational Interest Record (VIR) among boys.

(6) Higher academic achievers must be different significantly than the low academic achievers on Vocational Interest Record (VIR) among girls.

(7) Higher academic achievers (boys) must differ significantly than those Higher academic achievers (girls) on Vocational Interest record.

(8) Low academic achievers (boys) must differ significantly than those low academic achievers (girls) on Vocational interest Record (VIR).

**Tools/Tests**

The purpose of the present investigation was to ascertain the socio-psychological factors (personality factors) and vocational interest related to the academic performance of under graduate students. The subjects (boys and girls) were
administered the tests given below :-

1. Adult Education Achievement Test (AEAT) :- This test is constructed Dr. (Mrs.) V. Malaiya, Dr. K.C. Malaiya and L.N. Dubey (Hindi Version).

2. 16 P.F. Test .(Hindi version by S.D. Kapoor)

3. Vocational Interest Record (VIR) Constructed by Dr. S.P. Kulshrestha (Hindi Version).

1. **Adult Education Achievement Test** - This test was constructed by Dr. (Mrs.) V. Malaiya, Dr. K.C. Malaiya and L.N. Dubey, Keeping the view of measuring the ability of various aspects in education like language, mathematical ability, the knowledge of civics, political knowledge and general knowledge. This test measures the achievement of adult persons acquired knowledge of the above quoted fields. This test is comprised of 75 items and a limitation of maximum one hour. The reliability of this test was found on the basis of correlational method for all the five fields of language, Mathematics, Civics, political and general knowledge for both the males and females. This test was found to be highly reliable and valid.
<table>
<thead>
<tr>
<th>S. No.</th>
<th>Male</th>
<th>Female</th>
<th>Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>27 &amp; below</td>
<td>25 &amp; below</td>
<td>Lowest achievement</td>
</tr>
<tr>
<td>2.</td>
<td>28-34</td>
<td>26-31</td>
<td>Low achievement</td>
</tr>
<tr>
<td>3.</td>
<td>35-41</td>
<td>32-37</td>
<td>Average Achievement</td>
</tr>
<tr>
<td>4.</td>
<td>42-48</td>
<td>38-43</td>
<td>High achievement</td>
</tr>
<tr>
<td>5.</td>
<td>49 &amp; above</td>
<td>44 &amp; above</td>
<td>Highest achievement</td>
</tr>
</tbody>
</table>

2. **16 P.F. Test** - The sixteen personality factor questionnaire (16 P.F. Test) is an objectively scorable test devised by basic research in psychology to give the most complete coverage of personality possible in a brief time. The test was designed for use with individuals aged sixteen and above. Forms A, B, C, and D are most appropriate for literate individuals whose educational level is roughly equivalent to that of the normal high school student. Two other forms of the test, E, which is presently available, and F, in preparation, are designed for individuals with marked educational and reading deficits. The
test can be scored by hand or by machine and various types of answer sheets are available for this reason.

Comprehensive coverage of personality rests upon measurement of sixteen functionally independent and psychologically meaningful dimensions isolated and replicated in more than thirty years of factor analytic research on normal and clinical groups. The test user may need a little practice to get used to handling as many as sixteen traits, but the expanded possibilities for understanding and predicting behaviour will more than compensate him for the effort involved.

The personality factors measured by the 16 PF are not just unique to the test but instead rest within the context of a general theory of personality. Nearly ten years of empirical, factor-analytic research preceded the first commercial publication of the test in 1949.

For convenience, these dimensions are set out briefly below in Table 3. Each factor is listed with its alphabetic designation and brief descriptions of low and high scores.
Table No. 3

The primary source traits covered by the 16 PF Test

<table>
<thead>
<tr>
<th>Factor</th>
<th>Low Sten Score Description (1-3)</th>
<th>High Sten Score Description (8-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Reserved detached, critical aloof, stiff Sizothymia</td>
<td>Outgoing, warmhearted, easygoing, participating Affectothymia</td>
</tr>
<tr>
<td>B</td>
<td>Dull Low intelligence</td>
<td>Bright High Intelligence</td>
</tr>
<tr>
<td>C</td>
<td>Affected by feelings, emotionally less stable, easily upset, changeable Lower ego strength</td>
<td>Emotionally stable, mature, faces reality, calm Higher ego strength</td>
</tr>
<tr>
<td>E</td>
<td>Humble, mild, easily led, docile, accommodating Submissiveness</td>
<td>Assertive, aggressive, competitive stubbors Dominance</td>
</tr>
<tr>
<td>F</td>
<td>Sober, taciturn, serious Desurgency</td>
<td>Happy-go-lucky, enthusiastic Surgency</td>
</tr>
<tr>
<td>G</td>
<td>Expedient, disregards rules Weaker superego strength</td>
<td>Conscicuous, persistent, moralistic, staid Stronger superego strength</td>
</tr>
<tr>
<td>H</td>
<td>Shy, timid, thread-sensitive Threctis</td>
<td>Venturesome, uninhibited, socially bold Parmia</td>
</tr>
<tr>
<td>I</td>
<td>Tough-minded, self-reliant, realistic Harria</td>
<td>Tender-minded, sensitive, clinging, overprotected Premia</td>
</tr>
<tr>
<td>L</td>
<td>Trusting, accepting conditions</td>
<td>Suspicious, hard to fool</td>
</tr>
<tr>
<td></td>
<td>Alaxia</td>
<td>Protension</td>
</tr>
<tr>
<td>M</td>
<td>Practical &quot;down-to-earth&quot; concerns</td>
<td>Imaginative, bohemian, absent-minded</td>
</tr>
<tr>
<td></td>
<td>Praxemia</td>
<td>Autia</td>
</tr>
<tr>
<td>N</td>
<td>Forthright, unpretentious, genuine but socially clumsy</td>
<td>Astute, polished, socially aware</td>
</tr>
<tr>
<td></td>
<td>Artlessness</td>
<td>Shrewdness</td>
</tr>
<tr>
<td>O</td>
<td>Self-assured, placid, secure, complacent, serene Untroubled adequacy</td>
<td>Apprehensive, self-reproaching, insecure worrying, troubled Guild proneness</td>
</tr>
<tr>
<td>Q₁</td>
<td>Conservative, respecting traditional ideas Conservatism of temperament</td>
<td>Experimenting, liberal, free-thinking Radicalism</td>
</tr>
<tr>
<td>Q₂</td>
<td>Group dependent, a &quot;joiner&quot; and sound follower Group adherence</td>
<td>Self-sufficient, resourceful, prefers own decisions Self-sufficiency</td>
</tr>
<tr>
<td>Q₃</td>
<td>Undisciplined self-conflict, lax follows own urges, careless of social rules Low self-sentiment integration</td>
<td>Controlled, exacting will power socially precise, compulsive, following self-image High strength of self-sentiment</td>
</tr>
<tr>
<td>Q₄</td>
<td>Relaxed, tranquil, torpid unfrustrated, composed Low ergic tension</td>
<td>Tense, frustrated, driven overwrought High ergic tension</td>
</tr>
</tbody>
</table>

These sixteen dimensions or scales are essentially independent. Any item in the test contributes to the score on
one and only one factor so that no dependencies were introduced at the level of scale construction. Moreover, the experimentally obtained correlations among the sixteen scales are generally quite small so that each scale provides some new piece of information about the person being tested.

In addition to the sixteen primary factors, the test can be used as a measure of eight secondary dimensions which, as mentioned above, are broader traits, scorable from the component primary factors.

Each psychologist must determine for himself the applicability of any instrument to the solution of problems which he faces. In evaluating the 16 PF, the essential elements he will wish to consider are:

1) that the test is embedded within the broader fabric or network of general psychological theory;

2) that in its present form the test rests upon an empirical foundation of more than ten facto analytic investigations across a pool of several thousand items;

3) that the psychometric properties of the scales (e.g. reliabilities, validities, etc.) have been explored and


reported for a variety of samples and conditions; and,

4) that research findings involving the test (reported in numerous books and articles) provide the test user with a rich base of criterion evidence in industrial, clinical, social and educational psychology.

The general theory of personality from which the 16 PF was developed, however, anticipated their demands along certain major dimensions. Thus, for example, related scales are available to measure primary source traits below the adult age range for which the 16 PF is intended. Special purpose tests have been devised to measure only one secondary trait, such as anxiety and extraversion, when the psychologist wishes to focus and intensify his measurement in this fashion. Similarly, the Clinical Analysis Questionnaire was developed to augment the power of the 16 PF in clinical usage by adding 12 scales, substantially pathological in nature, to the 16 normal scales.

2. CONSTRUCTION OF THE TEST

Arrangement of Questions - Ten to thirteen items are provided for each scale in Form A and Form B. In Form C and Form D, there are eight items for the Factor S scale, seven items for the motivational distortion scale, and six items for
each of the remaining scales. The questions are arranged in a roughly cyclic order determined by a plan to give maximum convenience in scoring by stencil.

**Method of Answering** - Three alternative answers are provided for each of the questions, since the two-alternative "forced-choice" situation, forbidding any "middle of the road" compromise tends to force a distorted distribution and may produce version to the test on the part of the examinee. This is particularly the case with adults of average or higher intelligence for whom Forms A, B, C and D are designed. With children, or with less intelligent, less competent, or culturally deprived adults, a two choice design appears better, and such a design is used in the 'low literate' scales of the 16 PF constructed for use with such populations (Forms E and F).

**Avoidance of Motivations Distortion Effects** - Questionnaires are often, justifiable, considered susceptible to distortion and deliberate faking. Test construction is aimed to minimise this; it is also responsibility of the examiner to neutralize such tendencies as far as possible. It is important to develop good rapport, and to let the client see that the test can
best contribute to his own benefit if he cooperates with frank reports. Actually, items have been chosen to be as "neutral" in value as possible, to emphasize both desirable and undesirable aspects at both ends of each factor scale. Furthermore, items which are not "face valid," i.e. which do not obviously refer to the trait but which correlationally are known to measure it, have been chosen wherever possible, as a "built-in" protection against distortion. In any case, this questionnaire problem is probably not so serious as its frequent discussion might seem to indicate, since the psychologist or counselor is most likely to use the test in those situations where the client fully realizes that accurate results will contribute to his own welfare. If time is taken to make sure that the person tested understands the importance of careful and truthful response, a long step toward achieving good measures has been taken.

Forms C and D are very frequently used in occupational selection work, an additional safeguard has been built into these tests, in the form of a special motivational distortion (MD) scale).

Consistencies of the Sixteen Scales

The first type of consistency to consider is reliability or the agreement of the factor score over time. Reliability may
be further subdivided into (a) dependability, i.e. short-term test-retest correlations, and (b) stability i.e. retest after a longer interval.

Table 4 shows dependability estimates for various test forms and combinations of forms. In all cases, retesting was done within one week after the first administration. Table which shows stability estimates for four samples. The time interval ranges between 2 and 48 months. As table 5 the consistency in factor scores is quite good even over a four-year interval.

Table No. 4

16 PF Dependability Coefficients: Test Retest with 2 to 7 Day Intervals.

<table>
<thead>
<tr>
<th>Source Trait</th>
<th>Form</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
<th>Q₁</th>
<th>Q₂</th>
<th>Q₃</th>
<th>Q₄</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>86</td>
<td>79</td>
<td>82</td>
<td>83</td>
<td>90</td>
<td>81</td>
<td>92</td>
<td>90</td>
<td>78</td>
<td>75</td>
<td>77</td>
<td>83</td>
<td>82</td>
<td>85</td>
<td>80</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>81</td>
<td>58</td>
<td>80</td>
<td>79</td>
<td>81</td>
<td>83</td>
<td>77</td>
<td>75</td>
<td>70</td>
<td>61</td>
<td>79</td>
<td>73</td>
<td>73</td>
<td>62</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>75</td>
<td>54</td>
<td>80</td>
<td>79</td>
<td>77</td>
<td>79</td>
<td>77</td>
<td>70</td>
<td>60</td>
<td>81</td>
<td>70</td>
<td>75</td>
<td>62</td>
<td>81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>89</td>
<td>65</td>
<td>87</td>
<td>88</td>
<td>90</td>
<td>88</td>
<td>93</td>
<td>89</td>
<td>87</td>
<td>82</td>
<td>76</td>
<td>89</td>
<td>83</td>
<td>85</td>
<td>78</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>82</td>
<td>45</td>
<td>76</td>
<td>78</td>
<td>80</td>
<td>75</td>
<td>86</td>
<td>83</td>
<td>69</td>
<td>68</td>
<td>60</td>
<td>76</td>
<td>66</td>
<td>76</td>
<td>76</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>82</td>
<td>76</td>
<td>83</td>
<td>77</td>
<td>80</td>
<td>83</td>
<td>86</td>
<td>83</td>
<td>75</td>
<td>68</td>
<td>67</td>
<td>79</td>
<td>75</td>
<td>68</td>
<td>77</td>
<td>82</td>
<td></td>
</tr>
</tbody>
</table>
# Table No. 5

16 PF Dependability Coefficients: Test Retest with 2 to 7 Day Intervals.

<table>
<thead>
<tr>
<th>Source Trait</th>
<th>Form</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
<th>Q₁</th>
<th>Q₂</th>
<th>Q₃</th>
<th>Q₄</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A+B)</td>
<td></td>
<td>85</td>
<td>63</td>
<td>75</td>
<td>85</td>
<td>78</td>
<td>84</td>
<td>88</td>
<td>87</td>
<td>76</td>
<td>71</td>
<td>74</td>
<td>77</td>
<td>83</td>
<td>81</td>
<td>70</td>
<td>78</td>
</tr>
<tr>
<td>A</td>
<td></td>
<td>80</td>
<td>43</td>
<td>66</td>
<td>65</td>
<td>74</td>
<td>49</td>
<td>80</td>
<td>85</td>
<td>75</td>
<td>67</td>
<td>35</td>
<td>70</td>
<td>50</td>
<td>57</td>
<td>36</td>
<td>66</td>
</tr>
<tr>
<td>A(Males)</td>
<td></td>
<td>49</td>
<td>28</td>
<td>45</td>
<td>47</td>
<td>48</td>
<td>54</td>
<td>49</td>
<td>63</td>
<td>40</td>
<td>43</td>
<td>39</td>
<td>57</td>
<td>52</td>
<td>46</td>
<td>41</td>
<td>56</td>
</tr>
<tr>
<td>A(Females)</td>
<td></td>
<td>62</td>
<td>23</td>
<td>48</td>
<td>52</td>
<td>52</td>
<td>46</td>
<td>64</td>
<td>53</td>
<td>12</td>
<td>49</td>
<td>21</td>
<td>52</td>
<td>51</td>
<td>50</td>
<td>41</td>
<td>51</td>
</tr>
</tbody>
</table>

The equivalence coefficients between single parallel forms and a certain combination of parallel forms that might be most frequently encountered are given in Table 6. These values are about as high as tests typically reach for the number of items.
### Table No. 6

#### Equivalence Coefficients of Test Forms for each Trait

<table>
<thead>
<tr>
<th>Source Trait</th>
<th>Form</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
<th>Q₁</th>
<th>Q₂</th>
<th>Q₃</th>
<th>Q₄</th>
</tr>
</thead>
<tbody>
<tr>
<td>A with B</td>
<td></td>
<td>57</td>
<td>49</td>
<td>54</td>
<td>52</td>
<td>61</td>
<td>47</td>
<td>71</td>
<td>59</td>
<td>37</td>
<td>40</td>
<td>21</td>
<td>59</td>
<td>34</td>
<td>39</td>
<td>43</td>
<td>62</td>
</tr>
<tr>
<td>N=6476</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C with D</td>
<td></td>
<td>35</td>
<td>49</td>
<td>48</td>
<td>39</td>
<td>36</td>
<td>44</td>
<td>55</td>
<td>47</td>
<td>16</td>
<td>35</td>
<td>16</td>
<td>51</td>
<td>26</td>
<td>40</td>
<td>33</td>
<td>37</td>
</tr>
<tr>
<td>N=377</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A+C</td>
<td></td>
<td>69</td>
<td>45</td>
<td>63</td>
<td>69</td>
<td>67</td>
<td>59</td>
<td>79</td>
<td>67</td>
<td>60</td>
<td>46</td>
<td>35</td>
<td>56</td>
<td>51</td>
<td>37</td>
<td>55</td>
<td>64</td>
</tr>
<tr>
<td>B+D</td>
<td></td>
<td>69</td>
<td>45</td>
<td>63</td>
<td>69</td>
<td>67</td>
<td>59</td>
<td>79</td>
<td>67</td>
<td>60</td>
<td>46</td>
<td>35</td>
<td>56</td>
<td>51</td>
<td>37</td>
<td>55</td>
<td>64</td>
</tr>
<tr>
<td>N=593</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The coefficients given here, however, are those which the test administrator will be concerned with most frequently. As is evident in all three of these tables, substantial increases in consistency are possible by using more than one form of the test and such combinations be used in all cases where maximum precision is needed.

#### Validity

The items in these final forms are the survivors from several thousands of items originally tried, and constitute only those which continue to have significant validity against the
factors after ten successive factor analyses (Cattell, 1973) on different samples. These analyses have both verified the existence and natural structure of the sixteen factors, and cross-validated the test items in their correlation with the factors on different adult population samples.

The validity of the test itself is meant to be a concept (or "construct") validity. That is to say, the test questions (or items), as stated above, are chosen as being good measures of the personality factors, as these factors are represented in research analysis. This concept validity of the scales can be evaluated directly by correlating the scale score with the pure factor. It was designed to measure. Table 7 gives these concept validity values for single forms and for various combinations of the forms. As with consistency, it is evident that substantial overall increases in validity are possible by using more than one form of the test. Still, even for the relatively brief (6 item) scales of Forms C and D, the validity coefficients are exceptionally high.
Table No. 7

Direct Concept Validities of the 16 PF Scales

<table>
<thead>
<tr>
<th>Source Trait</th>
<th>Form</th>
<th>N</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+B</td>
<td>958</td>
<td>86</td>
<td>53</td>
<td>77</td>
<td>71</td>
<td>88</td>
<td>77</td>
<td>94</td>
<td>80</td>
<td>67</td>
<td>71</td>
<td>64</td>
<td>86</td>
<td>68</td>
<td>80</td>
<td>80</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>C+D</td>
<td>794</td>
<td>87</td>
<td>91</td>
<td>63</td>
<td>82</td>
<td>90</td>
<td>54</td>
<td>90</td>
<td>45</td>
<td>65</td>
<td>85</td>
<td>74</td>
<td>71</td>
<td>68</td>
<td>82</td>
<td>70</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>958</td>
<td>79</td>
<td>35</td>
<td>70</td>
<td>63</td>
<td>83</td>
<td>67</td>
<td>92</td>
<td>70</td>
<td>49</td>
<td>44</td>
<td>41</td>
<td>71</td>
<td>62</td>
<td>70</td>
<td>68</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>958</td>
<td>78</td>
<td>44</td>
<td>66</td>
<td>64</td>
<td>79</td>
<td>69</td>
<td>87</td>
<td>75</td>
<td>63</td>
<td>73</td>
<td>60</td>
<td>81</td>
<td>51</td>
<td>70</td>
<td>69</td>
<td>59</td>
<td></td>
</tr>
</tbody>
</table>

The concept validity may also be evaluated indirectly by determining how well the test scale's correlations with a representative sample of diverse psychological variables agree with those the conceptual criterion (pure factor) is expected to have. Table 8 presents these concept validities, indirectly evaluated, for the full 16 PF (Forms A+B+C+D).

It will be seen that direct and indirect estimates of validity agree quite well. Both approaches place A and F, for example, among the highest, and M, N, O, and Q₁ among the lowest.

The direct concrete validities of the scales (i.e. their correlations with specific, external criteria) cannot be so neatly tabled as the concept validities have been above. This is simply
Table No. 8

Indirect Concept Validities of the f II 6

<table>
<thead>
<tr>
<th>Source Trait</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
<th>Q_1</th>
<th>Q_2</th>
<th>Q_3</th>
<th>Q_4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>96</td>
<td>95</td>
<td>95</td>
<td>91</td>
<td>96</td>
<td>94</td>
<td>95</td>
<td>96</td>
<td>91</td>
<td>74</td>
<td>63</td>
<td>84</td>
<td>83</td>
<td>90</td>
<td>93</td>
<td>93</td>
</tr>
</tbody>
</table>

3 Instructions for Administration

General - Simple and clear instructions are printed for the examinee on the cover of the test booklet. Although the test can be virtually self-administered, it is always important to establish good rapport with the examinees whether tested individually or in groups. Further, it is good to reinforce the instructions by orally reiterating that the examinee will, in the long run, be doing himself most good by being frank and honest in describing himself.

Instructions - Answers are always made on a separate answer sheet, never on the reusable test booklet, is acknowledged, whether to tear off the back of the test booklet as an answersheet, or whether to use a separate answer sheet which
is to be provided. Have him enter his name, etc. at the top of the answer sheet, and then ask him to read the instructions on the cover of the test booklet to himself, and then to work the four examples. About five minutes allowed for reading the instructions and working the examples, or less if less time seems sufficient. Then say, "Turn the page and begin."

The test is untimed, but it is good to remind examinees that they should not delay, but should give immediate answers and move along. Educated readers usually take forty-five to sixty minutes per form. It is also good to look around and correct early any improper ways of indicating answers that might later cause difficulty in scoring. Make sure that names have been filled in before collecting answer sheets, and especially that one, and only one, answer is given for every question on the test.

Scoring

Each answer scores 0, 1, or 2 points, except the Factor B (intelligence) answers which score 0 (incorrect) or 1 (correct). The score of each item contributes to only one factor total. Tests can be either hand scored, with a stencil key or machine scored.
Hand scoring is accomplished by key, easily, rapidly, and in a standard manner. The answers appear as pencil marks in the boxes on the given answer sheet. Two cardboard stencil scoring keys are used; one covers Factors (traits) A, C, F, H, L, N, Q₁, and Q₃ and the other. Factors B, E, G, I, M, O, Q₂ and Q₄. Simply fit stencil 1 over the answer sheet and count the marks visible through the holes for Factor A, allowing either 2 or 1, as indicated by the number printed adjacent to the hole. Sum these scores, and enter the total in the space indicated by the arrow on the stencil for Factor A (raw score); but note that Factor B (intelligence) is peculiar in that each correct mark visible in a hole gives a score of 1 only.

**INTERPRETATION OF THE PRIMARY FACTORS**

Predictions of scores on various criteria and assignment of individuals to various diagnostic clinical groups, can be carried out actuarially, by computation from standard scores. Where no correlations with criteria are known, knowledge of the psychological nature of the factors must guide initial prediction until empirical studies can be done in a particular situation. Moreover, even where correlational,
actuarial evidence about a certain criterion is available, it is desirable to add psychological judgement to immediate statistical computations to allow for changes of personality with learning, maturation, etc. or for anticipated changes in life situation.

Each of the primary factors measure by the 16 PF has an alphabetic designation (A through Q4), a technical title (which is given in parentheses in the following descriptions), and a brief, less technical title (given here in bold face), which the practitioner most commonly use.

The definitions and interpretations of the factors, as given below, are short, non-technical, and of course, less exact than the more intensive discussions available in the Handbook.

**Sixteen Primary Personality Factors**

**Factor- A**

Reserved, Detached, Critical, Cool (Sizothymia) Vs. Outgoing, Warmhearted, Easy-going Participating (Affectothymia)

The person who scores low (sten of 1 to 3) on Factor A tends to be still, cool, skeptical, and aloof. He likes things rather than people, working alone and avoiding compromises
of viewpoints. He is likely to be precise and "rigid" in his way of doing things and in personal standards and in many occupations these are desirable traits. He may tend, at times, to be critical, obstructive, or hard.

The person who scores high (sten of 8 to 10) on Factor A tends to be goodnatured, easy going emotionally expressive (hence naturally Affectothymia), ready to cooperate, attentive to people, softhearted, kindly, adaptable. He likes occupations dealing with people and socially impressive situations. He readily forms active groups. He is generous in personal relations, less afraid of criticism, better able to remember names of people.

FACTOR-B

Less Intelligent, Concrete- thinking (Lower scholastic mental capacity) Vs. More Intelligent, Abstract thinking, Bright (Higher scholastic mental capacity)

The person scoring low on Factor B tends to be slow to learn and grasp, dull, given to concrete and literal interpretation. His dullness may be simply a reflection of low
intelligence, or it may represent poor functioning due to psychopathology. The person who scores high on Factor B tends to be quick to grasp ideas, a fast learner, intelligent. There is some correlation with level of culture, and some with alertness. High scores contraindicate deterioration of mental functions in pathological conditions.

**FACTOR-C**

Affected by Feelings, Emotionally Less, Stable, Easily Upset (Lower ego strength) Vs. Emotionally Stable, Faces Reality Calm, Mature (Higher ego strength)

The person who scores low on Factor C tends to be low in frustration tolerance for unsatisfactory conditions, changeable and plastic, evading necessary reality demands, neurotically fatigued, fretful, easily emotional and annoyed, active in dissatisfaction, having neurotic symptoms (phobias, sleep disturbances, psychosomatic complaints etc.) Low Factor C score is common to almost all forms of neurotic and some psychotic disorders.
The person who scores high on Factor C tends to be emotionally mature, stable, realistic about life, unruffled, possessing ego strength, better able to maintain solid group morale. Sometimes he may be a person making a resigned adjustment to unsolved emotional problems.

**FACTOR-E**

Humble, Mild, Accommodating Conforming (Submissiveness)  
Vs. Assertive, Independent, Aggressive Competitive, Stubborn (Dominance)

The person who scores low on Factor E tends to give way to others, to be docile and to conform. He is often dependent, confessing, anxious for obsessional correctness. This passivity is part of many neurotic syndromes.

The person who scores high on Factor E is assertive, self-assured, and independent - minded. He tends to be austere, a law to himself, hostile or extrapunitive, authoritarian (managing others), and disregards authority.
FACTOR-F

Sober, Prudent, Serious, Taciturn (Desurgency) Vs. Happy-go-lucky, Impulsively Lively, Enthusiastic (Surgency)

The person who scores low on Factor F tends to be restrained, reticent, introspective. He is sometimes dour, pessimistic, unduly deliberate, and considered smug and primly correct by observers. He tends to be a sober, dependable person.

The person who scores high on this trait tends to be cheerful, active, talkative, frank, expressive, effervescent, carefree. He is frequently chosen as an elected leader. He may be impulsive and mercurial.

FACTOR-G

Expedient, Evades Rules, Feels Few Obligations Vs. Conscientious, Persevering, Staid, Rule bound (Stronger superego strength)

The person who scores low on Factor G tends to be
unsteady in purpose. He is often casual and lacking in effort for group undertakings and cultural demands. His freedom from group influence may lead to anti-social acts, but at times makes him more effective, while his refusal to be bound by rules causes him to have less somatic upset from stress.

The person who scores high on Factor G tends to be exacting in character, dominated by sense of duty, persevering, responsible, planful, "fills the unforgiving minute" He is usually conscientious and moralistic, and he prefers hard working people to witty companions. The inner "categorical imperative" of this essential superego (in the psychoanalytic sense) should be distinguished from the superficially similar "social ideal self" of Q₂⁺.

**FACTOR-H**

Shy, Restrained, Diffident, Timid (Threctia) Vs. Venturesome, Socially-bold, Uninhibited, Spontaneous (Parmia)

The person who scores low on this trait tends to be shy, withdrawing, cautious, retiring, a "wallflower". He usually
has inferiority feelings. He tends to be slow and impeded in speech and in expressing himself, dislikes occupations with personal contacts, prefers one or two close friends to large groups, and is not given to keeping in contact with all that is going on around him.

The person who scores high on Factor H is sociable, bold, ready to try new things, spontaneous, and abundant in emotional response. His "thick-skinnedness" enables him to face wear and tear in dealing with people and grueling emotional situations, without fatigue. However, he can be careless of detail, ignore danger signals and consume much time talking. He tends to be "pushy" and actively interested in the opposite sex.

FACTOR-I

Tough-minded, Self-reliant, Realistic No-nonsense (Harria) Vs. Tender-minded, Dependent, Overprotected, Sensitive (Premsia)

The person who scores low on Factor I tends to be practical, realistic, masculine, independent, responsible, but
skeptical of subjective, cultural elaborations. He is sometimes unmoved, hard, cynical, smug. He tends to keep a group operating on a practical and realistic "no-nonsense" basis.

The person who scores high on Factor I tends to be tender-minded, day-dreaming, artistic, fastidious, feminine. He is sometimes demanding of attention and help, impatient, dependent, impractical. He dislikes crude people and rough occupations. He tends to slow up group performance, and to upset group morale by unrealistic fussiness.

**FACTOR-L**

Trusting, Adaptable, Free of Jealousy, Easy to Get on With (Alaxia) Vs. Suspicious, Self-opinionated, Hard to Fool (Protension)

The person who scores low on Factor L tends to be free of jealous tendencies, adaptable, cheerful, uncompetitive, concerned about other people, a good team worker.

The person who scores high on Factor L tends to be mistrusting and doubtful. He is often involved in his own ego,
is self-opinionated, and interested in internal, mental life. He is
usually deliberate in his actions, unconcerned about other
people, a poor team member.

**FACTOR-M**

Practical, Careful, Conventional, Regulated by External
Realities, Proper (Praxernia) Vs. Imaginative up in Inner
Urgencies, Careless of Practical Matters, Absent-minded
(Autia).

The person who scores low on Factor M tends to be
anxious to do the right things, attentive to practical matters,
and subject to the dictation of what is obviously possible. He is
cconcerned over detail, able to keep his head in emergencies,
but sometimes unimaginative.

The person who scores high on Factor M tends to be
unconventional, unconcerned over everyday matters,
Bohemian, self-motivated, imaginatively creative, concerned
with "essentials", and oblivious of particular people and physical
realities. His inner-directed interests sometimes lead to
unrealistic situations accompanies by expressive outbursts. His individuality tends to cause him to be rejected in group activities.

**FACTOR-N**

Forthright, Natural, Artless, Sentimental (Artlessness) Vs. Shrewd, Calculating, Worldly, Penetrating (Shrewdness)

The person who scores low on Factor N tends to be unsophisticated, sentimental, and simple. He is sometimes crude and awkward, but easily pleased and content with what comes and is natural and spontaneous.

The person who scores high on Factor N tends to be polished, experienced, worldly, shrewd. He is often hardheaded and analytical. He has an intellectual, unsentimental approach to situations, an approach akin to cynicism.

**FACTOR-O**

Placid, Self-assured, Confident, Serene (Untroubled adequacy) Vs. Apprehensive, Worrying, Depressive, Troubled (Guilt proneness)
The person who scores low on Factor O tends to be placid, with unshakable nerve. He has a mature, unanxious confidence in himself and his capacity to deal with things. He is resilient and secure, but to the point of being insensitive of when a group is not going along with him, so that he may evoke antipathies and distrust.

The person who scores high on Factor O tends to be depressed, moody, a worrier, full of foreboding, and brooding. He has a childlike tendency to anxiety in difficulties. He does not feel accepted in groups or free to participate. High Factor O score is very common in clinical groups of all types (see Handbook).

**FACTOR-Q**

Conservative, Respecting Established Ideas, Tolerant of Traditional Difficulties (Conservatism) Vs. Experimenting, Critical, Liberal, Analytical, Free-thinking (Radicalism)

The person who scores low on Factor Q, is confident in what he has been taught to believe and accepts the "tried
and true," despite inconsistencies, when something else might be better. He is cautious and compromising in regard to new ideas. Thus, he tends to oppose and postpone change, is inclined to go along with tradition, is more conservative in religion and politics, and tends not to be interested in analytical "intellectual" thought.

The person who scores high on Factor Q₁ tends to be interested in intellectual matters and has doubts on fundamental issues. He is skeptical and inquiring regarding ideas, either old or new. He tends to be more well informed, less inclined to moralize, more inclined to experiment in life generally, and more tolerant of inconvenience and change.

**FACTOR-Q₂**

Group-dependent, A “Joiner” and Sound Follower (Group adherence) Vs. Self- sufficient, Prefers Own Decisions, Resourceful (Self-sufficiency)

The person who scores low on Factor Q₂, prefers to work and make decisions with other people, likes and depends
on social approval and admiration. He tends to go along with
the group and may be lacking in individual resolution. He is not
necessarily gregarious by choice; rather he needs group
support.

The person who scores high on Factor Q₂ is
temperamentally independent, accustomed to going his own
way, making decisions and taking action on his own. He
discounts public opinion, but is not necessarily dominant in his
relations with others (see Factor E). He does not dislike people
but simply does not need their agreement or support.

FACTOR-Q₃

Undisciplined Self-conflict, Careless of Protocol, Follows Own
Urge (Low integration) Vs. Controlled, Socially precise,
Following Self-image (High self-concept control)

The person who scores low on Factor Q₃ will not be
bothered with will control and regard for social demands. He is
not overly considerate, careful, or painstaking. He may feel
maladjusted, and many maladjustments (especially the
affective, but not the paranoid) show $Q_3$.

The person who scores high on Factor $Q_3$ tends to have strong control of his emotions and general behavior, is inclined to be socially aware and careful, and evidences what is commonly termed "self-respect" and regard for social reputation. He sometimes tends, however, to be obstinate. Effective leaders, and some paranoids, are high on $Q_3$.

**FACTOR-Q**

Relaxed, Tranquil, Torpid, Unfrustrated (Low ergic tension) Vs.
Tense, Frustrated, Driven, Overwrought (High ergic tension)

The person who scores low on Factor $Q_4$ tends to be sedate, relaxed, composed, and satisfied (not frustrated). In some situations, his oversatisfaction can lead to laziness and low performance, in the sense that low motivation produces little trial and error. Conversely, high tension level may disrupt school and work performance.

The person who scores high on Factor $Q_4$ tends to be tense, excitable, restless, fretful, impatient. He is often
fatigued, but unable to remain inactive. In groups he takes a poor view of the degree of unity, orderliness, and leadership. His frustration represents an excess of stimulated, but undischarged, drive.

3. **Vocational Interest Record (VIR)** - This test has been constructed by Dr. S.P. Kulshrestha for guidance purposes to the child for a right choice after completing the schooling, which would accord well with his developed abilities, aptitudes, interests, personality qualities and present situations and would contribute to his individual happiness and social good. Educational institutions and schools must take the responsibility of helping the child in the vocational sphere of his life, because occupation is not only a means of earnings a livelihood but also a way of life. Therefore vocational guidance is very necessary to the child from the very early stage when the child enters school and continues even after a stable choice has been made. It is intimately related with child's acquisition of knowledge, understanding and skill which actually form the basis for his vocational choice. Vocational guidance helps the child to choose up to their choice for a good result.
Super (1957) gave a concept "vocational guidance is the process of helping a person to develop and accept an integrated and adequate picture of himself and of his role in the world of work, to test this concept against reality, and to convert it into reality with satisfaction to himself and benefit to society." Therefore the vocational guidance programme is much importance at all the stages of education.

The study of interests has probably received the strongest impetus from vocational and educational guidance. To a slightly lesser extent, the development of tests in this area has also been stimulated by vocational selection and classification. The consideration of the individuals interest is of practical significance (Anastasi, 1976). The early investigations included the direct questioning to find out the individuals interest, which were discovered superficial, unreliable and unrealistic (Fryer, 1931). Therefore the indirect approaches were employed and several standardized interest inventories were subsequently prepared. Burkshire, Bugental and Cassens (1948) reported the Strong Vocational Interest Blanks, Kuder Preference record and the California Test
Bureau's Occupational Interest Inventory to be the most frequently used. The other important foreign tests of interest are Thorpe, Meyer & Sea: An Inventory of Children Interest, Steward & Brainard: Specific Interest Inventory, Thurston: Interest Schedule; Giest: Picture Interest Inventory.

One of the major functions of guidance programme is to help the child to prepare himself for a right vocational choice and when he has finished schooling, to help him in making a choice which would accord well with his developed abilities, aptitudes, interests, personality qualities and present situations and would contribute to his individual happiness and social good. In other words the school should take up the responsibility of helping the child in the vocational sphere of his life, because occupation is not only a means of earning a livelihood but also a way of life - a social role.

Therefore vocational guidance should be provided to the child from the very early stage when the child enters school and continues even after a stable choice has been made. It is intimately related with child's acquisition of knowledge, understanding and skill which actually from the basis for his
vocational choice. It is usually happens in the school where no guidance programme exist, that pupils choose such subjects for the study which have no or little relationship with their vocational goals and ambitions, with the result they get traumatic shock when they find that they have not prepared themselves for the vocation which they wanted to enter.

On the basis of the above discussion, now we are in a position to understand the nature of vocational guidance. In this respect author agrees with Super's (1957) concept, "vocational guidance is the process of helping a person to develop and accept an integrated and adequate picture of himself and of his role in the world of work, to test this concept against reality, and to convert it into a reality with satisfaction to himself and benefit to society." Therefore it is included that vocational guidance programme is essential at all the stages of education - elementary, secondary & college. The study of interests has probably received its strongest impetus from vocational & educational guidance & counselling. To a slightly lesser extent, the development of tests in this area has also been stimulated by vocational selection & classification From
the viewpoint of both the worker & the employer, a consideration of the individual's interest is of practical significance (Anastasi, 1976). The early investigations included the direct questioning to find out the individual's interests, which were discovered superficial, unreliable and unrealistic (Fryer, 1931). Therefore the indirect approaches were employed and several standardized interest inventories were subsequently prepared. Berkshire, Bugental, and Cassens (1948) report the Strong Vocational Interest Blanks, Kuder Preference Record and the California Test Bureau's Occupational Interest Inventory to be the most frequently used. The other important foreign tests of interest are Thorpe, Meyers & Sea: An Inventory of Children Interest, Steward & Brainard: Specific Interest Inventory, Thurstone: Interest Schedule, Giest: Picture Interest Inventory.

In India, sufficient work has been done for the purpose of measuring the interests of the persons. The first work was done by Allahabad Bureau (1956), who has developed the Vocational Interest Record, based on Kuder Preference Record. Ray & Choudhary has developed 'Vernon Ray Interest Survey' in 1957, and Ojha has prepared Interest Test based on Strongs.
Test in 1958. Chatterjee (1960) has developed 'Non Language Preference Record (CNPR) the other important test are PSM: Jabalpur Interest Inventory, Hafeez: Interest Test, Pandey: Interest Test, Singh; Interest Record, Mascaren Vias: Interest Inventory, Kulshrestha: Interest Parisuhi, ISPT: Semistructured Vocational Interest test and ISPT: Prediction of Vocational Interests etc.

Vocational Interest Record (VIR):

This interest record was first developed in the year 1965, which was thoroughly revised in 1970, 1975 and 1977 by S.P. Kulshrestha. By this time, this scale has been used in about 250 research studies. It has been consistently in use for the testing practicum at graduate and postgraduate levels of many Universities in Psychology & Education, Subject Guidance workers has also found it very useful as a screening device for discovering the vocational interests of their clients.

Vocational interest is defined as one's own pattern of preferences, aptitudes, likes & dislikes, preferred in any manner, wisely or unwisely by self or by another source for a given
vocational area or vocation. Therefore the purpose of the present record is to help students to adjust themselves to the career/Jobs/vocations, by making wise choices. Only by making right choice the student will be able to utilize his all the potentialities to the maximum extent.

Thus the main purpose of the VIR is to measure vocational interests, to enable the pupils to select such subjects in schools which are according to their preferred vocations.

This record has been successfully used for more than a decade by the research workers guidance counsellors and psychologists (since 1965) and found suitable for delta nd higher secondary students, as well as for the students of colleges nd also for young adults out of schools & colleges.

Description of the test -

The present record contains 200 vocations belonging to ten different vocational interest areas:

1. Literary (L) - The literary scale includes the jobs like Editor Translator, Critic, Journalist, Poet, Writer, Language
specialist, Dramatist, Epic Writer, Language teacher, Novelist, and Story writer etc.

2. Scientific (SC) - This includes Jobs like Mechanical Engineer, Chemical Engineer, Scientist, civil engineer, Health officer, Compounder, Aestrologer, Atomic Scientist, Medical Representative, Botanist, Science Teacher, Veterinary Doctor, Vaccinater Chemist, Doctor, Scientific Apparatus Manufacturer and Electric Engineers etc.

3. Executive (E) - Executive area includes the jobs like Mayor of Corporation, Hospital Superintendent, President, Dy. Collector, Probation Officer, Army Officer, Hony, Magistrate, City Magistrate Judge, Police Superintendent, Manager, School Inspector, Principal, Tehshildar etc.

4. Commercial (C) - The following jobs are included in the area of commercial interests. Typist, Secretary, Shopkeeper, Steno, Accountant, Ticket Collector Commerce Teacher, Treasurer, Draftsman, Income Tax Officer, Salesman, Industry Manager etc.

5. Constructive (Co) - Constructive includes the
interest in vocations of Goldsmith, Ironsmith, Forman, Radio Mechanic, Dyer, Teacher of Art Crafts, Bookbinder, Washerman, Welder, Carpenter, Potter, Toy maker etc.

6. Artistic (A) - Artistic jobs include the assignment Singer, Music Director, Musical Instrument Maker, Picture-artist, Decorater, Stage Director, Painter, Cartoonist, Photographer, Dancer, Sculpturer etc.

7. Agriculture (AG) - This area is concerned with the assignments of Gardener, Farmer, Animal Husbender, Agri. Inspector, Seedstore Officer, Soil Specialist, Manure Specialist, Tractor Driver, Agri-reseacher, Poultry man, Agri-teacher, Breeder, Nursery-prepare, Horticulturist, Dairyman etc.

8. Persuasive (P) - Persuasive jobs are full of persuasion. They are Advertisement manager, MP, MLA, Insurance-agent, Order books, Vocational-counsellor, Political lecturer, Ambassador, Advocate, Religious preecher, Tourist-guide, Sales Manager etc.

9. Social (S) - Social jobs which were taken in the
test, are: Village level worker, Scout & Guide, Religious
Reformer, Red-cross workers catering the need of happy
children, Free medicine seller Hony teacher, Guide, Social
worker etc.

**10. Household (H)** - Household jobs are cooker,
Embroider, Home Science Teacher, Home Science Researcher,
Nurse, Home manager, Expert in cooking; Home Decorater,
etc.

Thus, this test includes 10 vocational areas. Each of
these areas has twenty jobs/vocations/assignment on the
record, 10 in horizontal and 10 on vertical side.

**ADMINISTRATION OF VIR**

It is a self administering record and may be
administered individually as well as in group. The instructions
with examples are given on the front page of the record.

निदेशः

1— इस प्रपत्र का मुख्य उद्देश्य आपकी व्यावसायिक पसंद
जानना है जिससे कि आपका व्यवसायिक निर्देशन किया जा सके।

2- इस प्रपत्र के प्रत्येक खाने में दो व्यवसाय अंकित हैं, वेतन प्रतिष्ठा एवं उसके भविष्य को दृष्टिगत रखते हुए आप प्रत्येक खाने में अंकित दोनों व्यवसायों में से अपनी व्यवसायिक रुचि के सम्बन्ध में विचार प्रकट कर सकते हैं। आपको निम्न भांति अपनी व्यवसायिक पसंद अंकित करनी है।

(अ) यदि आप खाने का पहला व्यवसाय पसंद करते हैं तो नं0 1 के सामने सही का चिन्ह अंकित कीजिए।

(ब) यदि आप खाने का दूसरा व्यवसाय पसंद करते हैं तो नं0 2 के सामने सही का चिन्ह अंकित कीजिए।

(ग) यदि आप खाने के दोनों व्यवसाय पसंद करते हैं तो नं0 1 एवं नं0 2, दोनों के सामने सही का चिन्ह अंकित कीजिए।

(ड) यदि आप खाने के दोनों व्यवसाय नापसंद करते हैं तो नं0 1 एवं नं0 2 दोनों के सामने क्रास का चिन्ह अंकित कीजिए।

इस प्रकार प्रत्येक खानों के व्यवसायों के सम्बन्ध में आपको अपनी, रुचि-अरुचि व्यक्त करनी है तथा कोई भी खाना खाली नहीं छोड़ना है। यदि इस सम्बन्ध में कोई संकोच हो तो
3— इस प्रश्न के लिए यदापि कोई समय सीमा निशिचत नहीं है फिर भी सीधता से उत्तर दीजियेगा। अधिकांशतः इसे करने में 7 से 10 मिनट का समय लगता है।

4— समस्त खानों में अपनी व्यावसायिक पसंद अंकित करने के पश्चात यह प्रश्न वापस कर दीजियेगा।

**SCORING**

The maximum possible scores under each vocational interest area is 20 and the minimum is zero. Assign 1 mark for each right marked (√) responses and countout the total scores under each interest area. For example, to know the interest in literary (L) area, sum the total for L 1 and L2. For L 1 sum up all the right marked (√) responses vertically for first figure in first column and for L2 add all the right marked (√) responses horizontally for second figure in first (horizontal) column. Thus both the sums for L 1 (vertically) and L2 (horizontally) provide a total score for L which indicates the interest in literary field and may be recorded on the last page of the black. In the same manner, raw scores for other vocational areas may be
counted. After obtaining raw scores on all the ten different vocational areas, the scores may be transcribed on profile areawise.

**Standardization**

It has been standardized on a sample of 1050 students of delta class and 700 students of high school grade of different institutions of U.P. and M.P. provinces. Stratified random sampling is employed for the purpose.

**RELIABILITY**

The test retest reliability coefficient is obtained 69 with a time interval of 15 days.

**Validity** –

1. Initially only highly valid items were selected from Thurston's Interest Schedule, Strong's Vocational Interest Blank, Kuder's Preference Record Form C etc.

2. The scores on the record were correlated with parent's teacher's and friend's opinion about the interests of
the pupils and coefficient of validity was found .81, .83 and .85 respectively.

3. The coefficient of validity is found .74, when this record is validated with Labh Singh's Vocational Interest Inventory.

4. The comparison of results also done with the results of follow up study of the students and the coefficient of correlation was found about .80 which is significant at .01 level.

NORMS & INTERPRETATION -

Scores can be interpreted in two ways quantitatively and qualitatively.

The interest scores can be presented in hierarchical order through the profile (given on the last page of the record) and thus main vocational interest area, second interest area, third interest area and the least interest area may be understood by counting the frequencies of each vocational interest area, Percentage for each interest area can also be calculated. This is a qualitative interpretation of the scores.
The other quantitative method of interpretation is on the basis of classification and based on the result of revised norms follows.

**Table No. 9**

**VIR - MANUAL**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Interest</td>
<td>19 - 20</td>
</tr>
<tr>
<td>Above Average Interest</td>
<td>14 - 17</td>
</tr>
<tr>
<td>Average Interest</td>
<td>07 - 13</td>
</tr>
<tr>
<td>Below Average Interest</td>
<td>04 - 06</td>
</tr>
<tr>
<td>Low Interest</td>
<td>00 - 03</td>
</tr>
</tbody>
</table>