## APPENDICES

## APPENDIX A

THE CALCULATION OF THE DIFFICULTY INDEX AND

## DISCRIMINATION POWER OF THE FIRST TRY-OUT

| Item <br> Number | Discrimination Power | Interpretation |
| :---: | :---: | :---: |
| 1 | 0.07 | Poor |
| 2 | 0.29 | Satisfactory |
| 3 | 0.29 | Satisfactory |
| 4 | 0.07 | Poor |
| 5 | 0.29 | Satisfactory |
| 6 | 0.07 | Poor |
| 7 | 0.14 | Poor |
| 8 | 0.5 | Good |
| 9 | 0.21 | Satisfactory |
| 10 | 0.36 | Satisfactory |
| 11 | 0 | Poor |
| 12 | 0.14 | Poor |
| 13 | 0.07 | Poor |
| 14 | 0.07 | Poor |
| 15 | 0.07 | Poor |
| 16 | 0.57 | Gcod |
| 17 | 0.21 | Satisfactory |
| 18 | 0.5 | Good |
| 19 | 0.29 | Satisfactory |
| 20 | 0.43 | Good |
| 21 | 0 | Poor |
| 22 | 0.07 | Poor |
| 23 | 0.5 | Good |
| 24 | 0.36 | Satisfactory |
| 25 | 0.36 | Satisfactory |
| 26 | 0.43 | Good |
| 27 | 0.21 | Satisfactory |
| 28 | 0.07 | Poor |
| 29 | 0.14 | Poor |
| 30 | 0.29 | Satisfactory |


| Difficulty Index | Interpretation |
| :---: | :---: |
| 0.961 | Easy |
| 0.569 | Moderate |
| 0.784 | Easy |
| 0.922 | Easy |
| 0.824 | Easy |
| 0.373 | Moderate |
| 0.686 | Moderate |
| 0.765 | Easy |
| 0.588 | Moderate |
| 0.863 | Easy |
| 0.98 | Easy |
| 0.922 | Easy |
| 0.98 | Easy |
| 0.922 | Easy |
| 0.961 | Easy |
| 0.353 | Moderate |
| 0.824 | Easy |
| 0.255 | Difficult |
| 0.804 | Easy |
| 0.608 | Moderate |
| 0.863 | Easy |
| 0.392 | Moderate |
| 0.392 | Moderate |
| 0.804 | Easy |
| 0.784 | Easy |
| 0.529 | Moderate |
| 0.902 | Easy |
| 0.902 | Easy |
| 0.941 | Easy |
| 0.765 | Easy |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

FIRST TRY OUT

| NO. | ITEM NUMBER |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 7 | 8 | 9 | 110 | [11] |  | \|131 | 14 | 4 15 | 16 | 17 |  | $8 / 10$ |  |  |  |  |  |  |  |  |  |  |  | 30 |  | X |
| 2 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | () | 1 | 1 |  | 27 |
| 4 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 11 | 11 | 11 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 27 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  | 01 | 1 |  | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 27 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 01 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 27 |
| 11 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | ) 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 26 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - 0 | 1 | 11 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |  | 26 |
| 41 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 01 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 26 |
| 3 | 1 | 1 | 1 | 1 | 1 | 0 |  | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |  |  | 25 |
| 29 | 1 | 0 | 1 | 1 | 1 | 0 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 11 | 1 | 0 | 0 | 1 | 1 | 0 |  | 1 | 1 |  |  | 25 |
| 33 | 1 | 1 | 1 | 1 | 1 | 0 |  | 1 | 1 | 1 | 1 | 1 | , | 1 | 1 | 1 | 0 | 1 | 0 | 01 | 10 | 0 | 1 | 1 | 1 | 1 | , | 1 | 1 | 1 | 1 | 0 |  | 25 |
| 36 | 1 | 0 | 1 | 1 | 1 | 0 |  | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |  | I | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 25 |
| 50 | 1 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 10 | 01 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |  |  | 25 |
| 9 | 1 | 1 | 1 | 0 | 0 | 1 |  | 1 | 1 | 1 | 1 | 1 | I | 1 | , | 1 | 1 | 1 | 0 | 0 | 10 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |  | 1 |  |  | 24 |
| 13 | 1 | 0 | 1 | 1 | 1 | 0 |  | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 |  |  | 24 |
| 17 | 1 | 1 | 0 | 1 | 1 | 0 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |  | 1 | 1 | 0 | 1 | 1 | 0 | 01 | 11 | 1 |  |  | 24 |
| 25 | 1 | 0 | 1 | 1 | 1 | 0 |  | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 10 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 24 |
| 31 | 1 | 1 | 0 | 1 | 1 | 0 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | () | 1 | 1 | 1 | 1 |  |  | 24 |
| 34 | 1 | 0 | 1 | 1 | 1 | 0 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | 0 | 1 | 1 | 0 | 1 | ) | 0 | ) 1 | 11 | 1 |  |  | 24 |
| 42 |  | 1 | 1 | 1 | 1 | 0 |  | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | ) 1 | 0 | 0 | 10 | 01 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |  |  |  | 24 |
| 6 |  | 0 | 1 | 0 | 1 | 1 |  | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 11 | 1 | 1 | 1 | 1 | 1 | 0 | ) 1 | 1 |  |  |  | 23 |
| 8 |  | 0 | 0 | ) 1 | 1 | 1 |  | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 11 | 1 | 1 | 0 | 1 | 0 | 0 | ) 1 | 11 |  |  |  | 23 |
| 15 |  | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 10 | 0 | 11 | 10 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 11 | 1 |  |  | 23 |
| 23 |  | 0 | ) | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 11 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 11 | 1 |  |  | 23 |
| 37 | 1 | 0 | 0 | ) 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |  |  | 23 |
| 39 |  | 0 | 0 | 01 | 1 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 11 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | ) 1 | 11 | 1 | 0 |  | 23 |



| C.I.OWER |  |  |  |  | [23 |  |  | $0 \mid 15$ |  |  |  | 24 |  | $22 \mid$ |  | $[23$ |  | 219 |  |  | 151 |  | 20] |  |  | 817 |  | $10 \mid 20$ | 22\| 2 | 23117 |  | X |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 45 | 1 |  | 1 | 1 | 1 | 1 | 0 | 0 | ) 1 | 1 | 11 | 1 | 11 | 11 | 11 | 1 |  |  |  | 0 | 1 | , | 1 |  |  | 1 | 1 | () 1 | , | 11 |  | 23 |
| 12 | 1 |  | 1 | 1 | 1 | 0 | 0 | 0 | ) 1 | 1 | 11 | 1 | 10 | 0 I | 1 | 1 | 0 | 1 |  | 0 | 1 | 1 | 1 | 0 | 1 | ) | 1 | 11 | 1 | 11 |  | 22 |
| 19 | 1 |  | 0 | 1 | 1 | , | 0 | 1 | 1 | 1 | 10 | 1 | 11 | 11 | 1 | 1 | 0 | 1 |  | 0 | 0 | 1 | 1 | 0 |  | 11 | 1 | 0 | 1 | 11 |  | 22 |
| 32 | 1 |  | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 11 | 11 | 10 | 1 | 0 | 1 |  | 0 | 1 | 1 | 1 | 1 |  | ) | 1 | 0 | 1 | 1 |  | 22 |
| 44 | 1 |  | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 0 | ) 1 | 0 | 01 | 11 | 11 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | ) 1 | 1 | 10 | 1 | 1 |  | 22 |
| 52 | 1 |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 | 1 | 11 | 11 | 11 | 1 | 0 | ) 1 | 0 | ) | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |  | 22 |
| 22 | 1 |  | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | () 1 | 1 | 11 | 11 | 10 | 1 | 0 | ) 1 |  | 1 | 0 | 0 | 0 | 0 | 1 | 11 | 1 | 11 | 1 | 1 |  | 21 |
| 40 | 1 |  | 1 | 1 | 1 | 0 | 0 | 1 | 0 | ) 1 | 11 | 1 | 11 | 11 | 11 | 0 | 0 | 1 |  | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |  | 21 |
| 1 | 1 |  | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 11 | 11 | 1 | 11 | 11 | 10 | 1 | 0 | 0 |  | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 10 |  | 20 |
| 18 | 1 |  | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 11 | 1 | 11 | 11 | 11 |  | 0 | 0 |  | 0 | 0 | 1 | 0 | 0 |  | 10 | 1 | 1 | 1 | 1 |  | 20 |
| 26 | 0 |  | 0 | 0 | 1 | 1 | 1 | 10 | 1 | 10 | 0 1 | 1 | 11 | 11 | 11 | 1 | 0 | ) |  | 0 | 1 | 0 | 1 | 0 | 0 | 01 | 1 | 1 | 1 | 11 |  | 20 |
| 27 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 11 | 1 | 1 | 10 | 1 | 11 | 11 | 11 | 1 | 1 | 1 |  | 0 | 0 | 0 | 1 | 1 | 0 | 01 | 1 | 0 | 1 | 10 |  | 20 |
| 28 |  |  | 0 | 0 | 1 | 0 | 1 | 10 | 0 | 0 | 01 | 1 | 11 | 11 | 11 | 1 | 0 |  | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 11 |  | 20 |
| 49 | 1 |  | 1 | 1 | 1 | 1 | 0 | ) 1 | 1 | 1 | 11 | 1 | 11 | 11 | 11 | 1 | 0 | 0 |  | 0 | 0 | 0 | 1 | 0 | 0 | 01 | 1 | 0 | 1 | 1 |  | 21 |
| 51 |  |  | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 11 | 11 | 1 | 11 | 11 | 11 | 1 | 0 | 1 |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 10 |  | 20 |
| 24 |  |  | 0 | 1 | 0 | 1 | 0 | 01 | 0 | 0 | 01 | 1 | 11 | 11 | 11 | 1 | 0 |  | 0 | 0 | 1 | 1 | 1 | 1 |  | 10 | 1 | 0 | 0 | 10 |  | 19 |
| 35 | $1$ |  | 1 | 1 | 1 | 1 | 1 | 11 | - | 0 | 01 | 1 | 11 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |  | 0 |  | ) 1 | 0 | 0 | 1 | 11 |  | 19 |
| 38 |  |  | , | 0 | 1 | 1 | 0 | 0 | 1 | 10 | 00 |  | 11 | 11 | 11 | 1 | 0 |  | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 00 | 1 | 1 | 1 | 01 |  | 19 |
| 7 |  |  | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | ) 0 | 1 | 11 | 11 | 11 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | - |  | 0 |  | 0 | 1 | 0 | 11 |  | 18 |
| 21 |  |  |  | 0 | 1 | 0 | 0 | 01 | 1 | 1 | 1 | 1 | 11 | 11 | 11 |  | 0 | 0 | 0 | ) | 1 | 1 |  |  |  |  | 1 | 0 | 1 | 11 |  | 18 |
| 46 |  |  | 1 | 1 | 1 | 0 | 0 | 0 | 1 |  |  | 1 | 1 | 11 | 11 |  |  |  |  | 0 | 1 | 0 |  |  |  | ) 0 | 0 | 10 | , | 10 |  | 18 |
| 5 |  |  | 0 | 1 | 0 | 1 | 0 | ) 1 | ) | ) 0 | ) 1 |  |  | 01 |  |  |  |  |  | 0 | 1 | 0 | , |  |  | ) 1 | , | 0 | 1 | 10 |  | 17 |
| 30 |  |  | , | 1 | 1 | 1 | 1 | 10 | ) 1 | 10 | 00 | , | 10 | 00 | 01 | 1 | 0 | 0 |  | 0 | 0 | 1 | 1 | 0 |  | 01 | 0 | 1 |  | 10 |  | 17 |
| 47 |  |  | 1 | 1 | I | 0 | 0 | 1 | 0 | 1 | 11 | 1 | 11 | 11 | 11 |  | 0 |  |  |  | 1 | 0 | 1 | 0 |  | ) 0 | 0 | 0 | 0 | 10 |  | 17 |
| 48 |  |  | 0 | 0 | 1 | 1 | 1 | 10 | 0 | 1 | 10 | - | 11 | 11 | 10 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | $0 \quad 1$ | 1 | $0 \quad 1$ |  | 17 |

FIRST TRY OUT

| NO. | ITEM NUMBER |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | . 11 | 12 | 13 | 14 | 15 |
| 2 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 41 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 29 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 33 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 36 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 50 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 13 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| cu | 14 | 11 | 14 | 13 | 13 | 6 | 10 | 14 | 10 | 14 | 14 | 14 | 14 | 14 | 14 |
| index | 0.07 | 0.29 | 0.29 | 0.07 | 0.29 | 0.07 | 0.14 | 0.5 | 0.21 | 0.36 | 0 | 0.14 | 0.07 | 0.07 | 0.07 |
| inter | poor | sat | sat | poor | sat | poor | poor | good | sat | sat | poor | poor | poor | poor | poor |
| cl | 13 | 7 | 10. | 12 | 9 | 5 | 8 | 7 | 7 | 9 | 14 | 12 | 13 | 13 | 13 |
| 27 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 28 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 49 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 51 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 35 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| 38 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 7 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 21 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 46 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 47 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 48 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 |

FIRST TRY OUT

| NO. | ITEM NUMBER |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1. | 1 | 0 |  | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 0 | 0 | 0 | 1 | 1 | 1 | , | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | I | 1 | 1 | 1 |
| 20 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 41 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| 29 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 33 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 36 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 50 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | , | 0 |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| Cu | 9 | 12 | 7 | 14 | 11 | 14 | 5 | 9 | 14 | 13 | 11 | 14 | 12 | 14 | 11 |
| index | 0.57 | 0.21 | 0.5 | 0.29 | 0.43 | 0 | 0.07 | 0.5 | 0.36 | 0.36 | 0.43 | 0.21 | 0.07 | 0.14 | 0.29 |
| inter | good | sat | good | sat | good | poor | poor | good | sat | sat | good | sat | poor | poor | sat |
| cl | 1 | 9 | 0 | 10 | 5 | 14 | 4 | 2 | 9 | 8 | 5 | 11 | 11 | 12 | 7 |
| 27 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 28 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | I | 0 | , | 1 | 1 | , | 1 |
| 49 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | , | 0 | 1 | 1 | 1 | 1 |
| 51 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 24 | 0 | 1 | 0 | 1 |  | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | , | 0 |
| 35 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | , | 1 | 1 | 1 | 1 |
| 38 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | , | , | 1 | 0 | 1 |
| 7 | 0 | 0 |  | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |  | , | 1 |
| 21 | 0 | 0 | 0 | 1 | 1 | , | 0 | 1 | 0 |  | 0 | 0 | 1 | 1 | 1 |
| 46 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| 5 | 0 | 1 | 0 | 1 | 0 | , | 0 | 0 | 1 | 1 | 0 | , | 1 | 1 | 0 |
| 30 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |
| 47 | 0 | 1 | 0 | , | 0 | , | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 48 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |

## APENDIX B

THE CALCULATION FOR RELIABILITY KR-21
OF THE FIRST TRY OUT

| Number of Students | X | $\mathrm{X}^{2}$ |
| :---: | :---: | :---: |
| 1 | 20 | 400 |
| 2 | 27 | 729 |
| 3 | 25 | 625 |
| 4 | 27 | 729 |
| 5 | 17 | 289 |
| 6 | 23 | 529 |
| 7 | 18 | 324 |
| 8 | 23 | 529 |
| 9 | 24 | 576 |
| 10 | 27 | 729 |
| 11 | 26 | 676 |
| 12 | 22 | 484 |
| 13 | 24 | 576 |
| 14 | 23 | 529 |
| 15 | 27 | 729 |
| 16 | 24 | 576 |
| 17 | 20 | 400 |
| 18 | 22 | 484 |
| 19 | 26 | 676 |
| 20 | 18 | 324 |
| 21 | 21 | 441 |
| 22 | 23 | 529 |
| 23 | 19 | 361 |
| 24 | 24 | 576 |
| 25 | 20 | 400 |
| 26 | 20 | 400 |
| 27 | 20 | 400 |
| 28 | 25 | 625 |
| 29 | 17 | 289 |
| 30 | 24 | 576 |
| 31 | 22 | 484 |
| 32 | 25 | 625 |


| 33 | 24 | 576 |
| :---: | :---: | :---: |
| 34 | 19 | 361 |
| 35 | 25 | 625 |
| 36 | 23 | 529 |
| 37 | 19 | 361 |
| 38 | 23 | 529 |
| 39 | 21 | 441 |
| 40 | 26 | 676 |
| 41 | 24 | 576 |
| 42 | 23 | 529 |
| 43 | 22 | 484 |
| 44 | 23 | 529 |
| 45 | 18 | 324 |
| 46 | 17 | 289 |
| 47 | 17 | 289 |
| 48 | 20 | 400 |
| 49 | 25 | 625 |
| 50 | 20 | 400 |
| 51 | 22 | 484 |
| Total | 1134 | 25646 |
| n | 51 | - |
| Mean | 22.2353 | - |
| SD | 2.937 | - |
| KR-21 | 0.333 | - |

## FIRST TRY OUT



## APPENDIX C

## THE CALCULATION OF THE DIFFICULTY INDEX AND

DISCRIMINATION POWER OF THE SECOND TRY-OUT

| Item Number | Discrimination Power | Interpretation |
| :---: | :---: | :---: |
| 1 | 0.38 | Satisfactory |
| 2 | 0.38 | Satisfactory |
| 3 | 0.54 | Good |
| 4 | 0.31 | Satisfactory |
| 5 | 0.31 | Satisfactory |
| 6 | 0.92 | Excellent |
| 7 | 0.92 | Excellent |
| 8 | 0.38 | Satisfactory |
| 9 | 0.23 | Satisfactory |
| 10 | 0.31 | Satisfactory |
| 11 | 0.46 | Good |
| 12 | 0.46 | Good |
| 13 | 0.54 | Good |
| 14 | 0.38 | Satisfactory |
| 15 | 0.62 | Good |
| 16 | 0.23 | Satisfactory |
| 17 | 0.46 | Good |
| 18 | 0.69 | Good |
| 19 | 0.54 | Good |
| 20 | 0.69 | Good |
| 21 | 0.54 | Good |
| 22 | 0.46 | Good |
| 23 | 0.31 | Satisfactory |
| 24 | 0.23 | Satisfactory |
| 25 | 0.46 | Good |
| 26 | 0.46 | Good |
| 27 | 0.38 | Satisfactory |
| 28 | 0.38 | Satisfactory |
| 29 | 0.54 | Good |
| 30 | 0.46 | Good |


| Difficulty Index | Interpretation |
| :---: | :---: |
| 0.63 | Moderate |
| 0.83 | Easy |
| 0.56 | Moderate |
| 0.9 | Easy |
| 0.27 | Difficult |
| 0.65 | Moderate |
| 0.58 | Moderate |
| 0.65 | Moderate |
| 0.85 | Easy |
| 0.23 | Difficult |
| 0.54 | Moderate |
| 0.46 | Moderate |
| 0.56 | Moderate |
| 0.21 | Difficult |
| 0.29 | Difficult |
| 0.73 | Easy |
| 0.27 | Difficult |
| 0.56 | Moderate |
| 0.6 | Moderate |
| 0.63 | Moderate |
| 0.83 | Easy |
| 0.85 | Easy |
| 0.79 | Easy |
| 0.6 | Moderate |
| 0.63 | Moderate |
| 0.23 | Difficult |
| 0.23 | Difficult |
| 0.6 | Moderate |
| 0.77 | Easy |
| 0.35 | Moderate |

## SECOND TRY OUT



| C.LOW |  |  |  |  | 31 | $\underline{9}$ |  | $6 \mid 13$ |  | 3 | 7 |  |  |  |  |  |  | 3 | 9 | 9 |  | 1711 |  |  |  |  |  | 3 10 13 | 4 | X |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 11 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | , | 0 | 0 | 0 | 1 | I |  | 1 | 0 |  | 0 | 0 | 16 |
| 36 | 0 | 0 | , | 1 | 0 | 1 | 1 | 11 | 1 | 0 | 0 | 0 |  | 11 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | I |  |  | 1 | 0 | 0 | 0 | $1$ | 16 |
| 47 | 1 | I | 1 |  | 0 | 0 | 1 | 10 | 0 | 1 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 10 | 0 | 0 |  |  |  | 0 | 15 |
| 26 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |  | 10 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |  |  |  |  |  | 0 | 0 | 14 |
| 30 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 11 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | I |  | 11 | 1 | 1 | 0 |  | 10 |  | 14 |
| 8 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |  | 10 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 10 | 0 | 0 |  | 0 |  | 14 |
| 22 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 10 | 0 | 0 | 1 |  | 0 | 14 |
| 25 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 11 | 1 | 0 | 1 | 0 | 0 | 01 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |  | 14 |
| 30 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 10 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 11 |  | 14 |
| 24 | 1 | 1 | 0 | 1 | , | 1 | 0 | 01 | 1 | 0 | 0 |  | 0 | 00 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |  | 0 | 0 |  | 14 |
| 19 | 0 | 0 | 1 | 0 | 0 | - | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | , | 11 | 10 | 0 | 0 |  | 0 |  | 12 |
| 46 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 00 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 11 |  |  | 1 | 0 | 0 | 10 |  | 12 |
| 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |  |  |  | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | i | 1 | 0 | 0 | 10 |  | 12 |
| 38 | 0 |  | 0 | 1 | 0 | 0 | 1 | 10 | 1 | 0 | 1 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | 11 |  | 11 |
| 18 |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 11 | 1 | 0 | 1 | 0 | 0 | 0 |  | 10 |
| 5 |  | I |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 01 | 1 | 1 | 0 | 0 | 0 | 11 |  | 10 |
| 11 |  | 1 | 0 |  | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 | 1 | 0 | 0 |  | 11 |  | 10 |
| 42 |  | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |  | 0 |  | 0 |  | 10 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 0 | 0 | 0 |  | 0 | 1 | 0 | 0 | 0 |  |  |  |  |  | 1 |  | 9 |
| 45 |  | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 1 | 0 |  |  | $\begin{array}{ll}0 & 0 \\ 0 & 0\end{array}$ |  | 8 |
| 9 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 01 | 1 | 0 | 0 | 0 | 0 | 0 |  | 8 |
| 31 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |  |  |  | 0 | 1 |  | 0 | 0 | 0 | $0 \quad 1$ | 1 | 0 |  | 0 |  | 00 |  | 7 |
| 6 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 01 | 1 | 10 | 0 | 0 | 0 |  | 7 |


| NO. | ITEM NUMBER |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4. | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 23 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 32 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 48 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 29 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 37 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 |
| 7 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| 14 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 |
| 21 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1. | 0 | 0 |
| 33 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 |
| Cu | 11 | 13 | 10 | 13 | 5 | 13 | 13 | 11 | 13 | 5 | 11 | 9 | 10 | 5 | 9 |
| index | 0.38 | 0.38 | 0.54 | 0.31 | 0.31 | 0.92 | 0.92 | 0.38 | 0.23 | 0.31 | 0.46 | 0.46 | 0.54 | 0.38 | 0.62 |
| inter | sat | sat | good | sat | sat | exc | exc | sat | sat | sat | good | good | good | sat | good |
| cl | 6 | 8 | 3 | 9 | 1 | 1 | 1 | 6 | 10 | 1 | 5 | 3 | 3 | 0 | 1 |
| 46 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 38 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| 18 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 5 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 13 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 45 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 9 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 6 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 47 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 48 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 |

DISCRIMINATION POWER
SECOND TRY OUT

| NO. | ITEM NUMBER |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 23 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 32 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 48 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 12 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 29 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 37 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 7 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| 33 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| Cu | 11 | 6 | 13 | 11 | 12 | 13 | 13 | 12 | 9 | 10 | 6 | 5 | 11 | 13 | 7 |
| index | 0.23 | 0.46 | 0.69 | 0.54 | 0.69 | 0.54 | 0.46 | 0.31 | 0.23 | 0.46 | 0.46 | 0.38 | 0.38 | 0.54 | 0.46 |
| inter | sat | good | good | good | good | good | good | sat | sat | good | good | sat | sat | good | good |
| cl | 8 | 0. | 4 | 4 | 3 | 6 | -71 | 8 | 6 | 4 | 0 | 0 | 6 | 6 | -1 |
| 46 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 2 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 38 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 18 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 5 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 11 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| 13 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 42 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 3 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 45 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 31 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 47 | 0 | 1 | . 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 48 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |

## APENDIX D

THE CALCULATION FOR RELIABILITY KR-21
OF THE SECOND TRY OUT

| Number of Students | X | $\mathrm{X}^{2}$ |
| :---: | :---: | :---: |
| 1 | 465 | 216225 |
| 2 | 20. | 400 |
| 3 | 27 | 729 |
| 4 | 25 | 625 |
| 5 | 27 | 729 |
| 6 | 17 | 289 |
| 7 | 23 | 529 |
| 8 | 18 | 324 |
| 9 | 23 | 529 |
| 10 | 24 | 576 |
| 11 | 27 | 729 |
| 12 | 26 | 676 |
| 13 | 22 | 484 |
| 14 | 24 | 576 |
| 15 | 22 | 484 |
| 16 | 27 | 729 |
| 17 | 24 | 576 |
| 18 | 20 | 400 |
| 19 | 22 | 484 |
| 20 | 26 | 676 |
| 21 | 18 | 324 |
| 22 | 21 | 441 |
| 23 | 23 | 529 |
| 24 | 19 | 361 |
| 25 | 24 | 576 |
| 26 | 20 | 400 |
| 27 | 20 | 400 |
| 28 | 20 | 400 |
| 29 | 25 | 625 |


| 30 | 17 | 289 |
| :---: | :---: | :---: |
| 31 | 24 | 576 |
| 32 | 22 | 484 |
| 33 | 25 | 625 |
| 34 | 24 | 576 |
| 35 | 19 | 361 |
| 36 | 25 | 625 |
| 37 | 23 | 529 |
| 38 | 19 | 361 |
| 39 | 23 | 529 |
| 40 | 21 | 441 |
| 41 | 26 | 676 |
| 42 | 24 | 576 |
| 43 | 23 | 529 |
| 44 | 22 | 484 |
| 45 | 23 | 529 |
| 46 | 18 | 324 |
| 47 | 17 | 289 |
| 48 | 17 | 289 |
| Total | 1099 | 230825 |
| n | 48 | - |
| Mean | 22.8958 | - |
| SD | 5.7547 | - |
| KR-21 | 0.7771 | - |

SECOND TRY OUT

| NO. | ITEM NUMBER |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 45 | $5 \mid 6$ | $6{ }^{6} 7$ | $7{ }^{7} 8$ | 88 | $9{ }^{1} 1$ |  | [11 |  | \|13 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 1 | 1 | 1 | 1 | 10 | 01 | 11 | 11 | 11 | 11 | 1 | 1 | 0 | 1 | 1 | 1 | 11 | 0 | 01 | 11 | 10 | 01 | 11 | 11 | 11 | 11 | 11 | 10 | 0 | 11 | 11 |  | 25 |
| 2 | 0 | 0 | 1 | 0 | 00 | 00 | 00 | 01 | 11 | 10 | 0 | 0 | 0 |  |  | 0 |  |  |  |  |  |  |  | 01 | 11 | 11 | 10 |  | 0 | 10 | 0 |  | 12 |
| 3 | 0 | 0 | 0 | 0 | 00 | 00 | 00 | 0 | 01 | 10 | 0 | 1 | 1 | 0 | 0 | 0 |  |  |  |  |  | 00 | 01 | 1 | 11 | 10 | 00 | 00 | 0 | 00 | 0 |  | 9 |
| 4 | 1 | 1 | 1 | 1 | 10 | 01 | 1 | 1 | 11 | 10 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 10 | 00 | 00 | 01 | 1 | 11 | 11 | 11 | 10 | 01 | , | 00 | 0 |  | 16 |
| 5 | 1 | 1 | 0 | 1 | 10 | 00 | 0 | 00 | 01 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 01 | 0 | 00 | I | 1 | 10 | 00 | - |  | 0 |  |  |  | 10 |
| 6 | 0 | 1 | 0 | 1 | 10 | 00 | 00 | 01 | 10 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |  | 7 |
| 7 | 1 | 1 | 1 | 1 | 10 | 01 | 11 | 11 | 11 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 11 | 11 |  | 11 | 1 | 1 | 11 |  | 0 | 0 | 1 | 11 |  | 23 |
| 8 | 0 | 1 | 1 | 1 | 10 | 01 | 10 | 01 | 11 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 10 | 01 | 11 | 1 | 1 | 0 | 01 | 10 | 01 | 10 | 00 | 0 | 0 | 0 |  | 14 |
| 9 | 0 | 1 | 1 | 1 | 10 | $0 \quad 0$ | 00 | 00 | 01 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 01 | 0 | 0 | 0 | 00 | 0 | 0 | 00 | 0 | 01 | 10 |  | 8 |
| 10 | 1 | 1 | 1 | 1 | 11 | 11 | 11 | 10 | 01 | 10 | 0 | 0 | 1 | 0 | 0 |  | 1 | 11 | 11 | 11 | 1 | 1 | 1 | 11 | 1 | 1 | 10 | 01 | 1 | 01 | 10 |  | 22 |
| 11 | 0 | 1 | 0 | 1 | 10 | 00 | 00 | 00 | 01 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 00 | 0 | 00 | 01 | 0 | 01 | 0 | 01 | 1 | 01 | 0 | 0 | 0 | 11 | 10 |  | 10 |
| 12 | 1 | 1 | 1 | 1 | 11 | 11 | 11 | 1 | 11 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 11 |  | 11 | 11 | 1 | 0 | 10 | 01 | 10 | 01 |  |  | 23 |
| 13 | 1 | 0 | 0 | 1 | 10 | 00 | 00 | 0 | 01 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 01 | 1 | 0 | - | 11 |  | 01 | 1 |  | 00 | 0 | 0 | 10 |  | 10 |
| 14 | 0 | 1 | 0 | 1 | 10 | 01 | 11 | 11 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 11 | 11 | 1 |  |  | 11 |  |  | 0 | 11 | 10 |  |  |  |  | 22 |
| 15 | 0 | 1 | 0 | 11 | 11 | 11 | 11 | 10 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 11 | 11 | 10 | 01 | 11 | 11 | 11 | 11 | 11 | 11 |  | 00 | 0 |  | 0 |  | 22 |
| 16 | $1$ | 1 | 1 | 1 | 11 | 11 | 11 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 11 | 11 | 1 | 11 | 1 | 11 | 1 | 0 | 0 O | 0 | 10 | 0 |  | 11 |  | 23 |
| 17 | $1$ | 1 | 1 | 1 | 11 | 11 | 10 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 00 | 0 | 01 | 11 | 1 |  | 11 | 1 | 11 | 1 | 11 | 10 | 0 |  | 0 |  | 21 |
| 18 | $1$ | 0 | 0 | 1 | 10 | 00 | 00 | 00 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 01 | 10 | 00 | 00 | 01 | 11 | 11 | 0 | 0 | 10 | 0 | 0 | 0 | 1 | 10 |  | 10 |
| 19 | $0$ | 0 | 1 | 0 | 00 | 01 | 10 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 1 | 0 | $0 \quad 0$ | 0 | 11 | 11 | 10 | 0 | 10 | 0 | 0 | 1 | 1 |  | 12 |
| 20 | $1$ | 1 | 1 | 1 | 10 | 01 | 11 | 10 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |  | 0 | 11 | 10 | 0 | 11 | 11 | 11 | 11 | 11 | 11 | 10 | 0 | 0 | 0 | 11 |  | 21 |
| 21 | 1 | 1 | 1 | 1 | 10 | 01 | 11 | 11 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 11 | 1 | 11 | 11 | 11 | 11 | 11 | 11 | 10 | 0 | 0 | 0 |  | 0 |  | 22 |
| 22 | $1$ | 1 | 1 | 1 | 10 | 00 | 00 | 00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 | 11 | 11 | 10 | 0 |  | 0 | 1 |  | 0 |  | 14 |
| 23 | $1$ | 1 | 1 | 1 | 10 | 01 | 11 | 10 | 0 | 1 | 1 | 0 | 1 | 1 | 1 |  | 1 | 10 | 0 | 11 | 1 |  | , | 11 | 11 | 1 | 11 | 10 | 0 | 1 | 11 |  | 25 |
| 24 | $1$ | 1 | 0 | 1 | 1 | 1 | 10 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 00 | 01 | 0 | 0 | 11 |  | 10 | 00 | 0 | 10 | 0 | 0 | 0 |  | 14 |
| 25 | $1$ | 0 | 1 | 1 | 0 | 01 | 11 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 01 | 10 | 00 | $0 \quad 0$ | 0 | 01 | 11 | 0 | 00 | 0 |  | 0 | 0 | 01 | 10 |  | 14 |
| 26 | $0$ | 1 | 0 | 1 | 10 | 01 | 10 | 01 | 10 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 00 | 00 | 01 | 0 | 0 | 0 | 11 |  | 11 | 0 | 01 | 1 | 1 |  | 10 |  | 14 |
| 27 | $1$ | 1 | 1 | 11 | 10 | $0 \quad 0$ | 01 | 11 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 10 | 01 | 1 | 1 | 11 | 11 | 11 | 10 | 01 | 10 | 0 | 1 |  |  |  | 21 |
| 30 | $0$ | 1 | 0 | 1 | 11 | 0 | 00 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 11 | 10 | 00 | 0 |  | 01 | 11 | 0 | 0 | 10 | 0 | 0 | 0 |  | 10 |  | 15 |
| 29 | $1$ | 1 | 1 | 11 | 11 | 1 | 11 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 11 | 10 | 0 |  | 11 | 11 | 11 | 11 | 10 | 00 | $0 \quad 1$ | 1 | 1 |  | 11 |  | 23 |
| 30 | $0$ | 1 | 0 | 1 | 10 | 01 | 11 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 00 | 01 | 10 | 01 | 11 | 11 | 11 | 11 | 11 | 10 | 0 | 0 | 0 | 10 | 0 0 |  | 14 |
| 31 | $0$ | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 01 | 10 | 00 | $0 \quad 0$ | 0 | 0 | 0 | 0 | 0 | 00 | $0 \quad 0$ | 0 | 0 | $0 \quad 0$ | 0 |  | 7 |
| 32 | $1$ | , | 1 | 11 | 11 | 1 | 11 | 1 | 1 | 1 | 0 | 1 | 1 |  | 1 | 1 | 11 | 10 | 0 | 11 |  | 11 | 1 | 0 | 0 | 1 | 10 | 0 | 1 |  |  |  | 25 |
| 33 | $1$ | 1 | 0 | 1 | 10 | 01 | 11 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 11 | 10 | 01 | 0 |  | 11 | 11 | 1 | 11 | 11 | 11 | 10 | 0 |  | 10 |  | 22 |
| 34 | $0$ | 1 | 1 | 11 | 11 | 0 | 01 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 01 | 11 | 11 | 11 | 0 | 0 | 11 | 11 | 11 |  | 10 | 0 | 0 |  | 10 |  | 20 |
| 35 | $0$ | 1 | 1 | 11 | 11 | 1 | 11 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 01 | 10 | 00 | 01 | 1 | 11 | 1 | 11 | 11 | 11 | 10 | 0 | 0 |  | 11 |  | 22 |
| 36 | $0$ | 0 | 01 | 11 | 10 | 01 | 11 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 00 | 00 | 01 | 10 | 1 | 11 | 11 | 11 | 11 | 0 | 0 | 0 | 0 | ) 1 |  |  | 16 |
| 37 | $0$ | 1 | 1 | 11 | 10 | 01 | 11 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 11 | 11 | 11 | 10 | 1 | 11 | 11 | 11 | 11 | , | 10 | 0 | 1 |  | 10 |  | 23 |
| 38 | $0$ | 1 | 0 | 01 | 10 | 0 |  | 1 | 0 | 1 | 0 |  | 0 | 1 | 0 | 0 | 00 | 00 | 00 | 01 |  | 01 | 10 |  | 10 | 0 | 0 | 0 | 0 | 11 | 10 |  | 11 |
| 39 | $1$ | 1 | 0 | 01 | 1 |  |  | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |  | 01 | 10 | 00 | 00 |  | 11 | 11 | 1 | 11 | 11 |  | 0 | 0 |  |  |  | 18 |
| 40 | $1$ | 1 | 1 | 11 | 0 | 01 | 1 | 1 | 1 | 1 | 1 |  | 1 | 1 | 0 | 1 | 11 | 10 | 01 |  |  | 0 | 0 | 0 | 0 | 0 | 10 | 0 |  |  |  |  | 20 |
| 41 | $1$ | 1 | 0 | 01 | 10 | 01 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 01 | 10 | 00 | 01 |  | 11 | 1 | 11 | 11 | 1 | 10 | 0 | 1 |  |  |  | 20 |
| 42 |  | 1 | 0 | 0 | 00 | 00 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 00 | 00 | 01 |  |  | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 |  | 0 |  | 9 |
| 43 | $1$ | 1 | 0 | 01 | 10 | 0 | 11 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 11 | 11 | 10 | 01 | 1 | 1 | 1 | 1 | 11 | 1 | 10 | 0 | 0 |  |  |  | 20 |
| 44 |  | 1 | 1 | 11 | 10 | 01 | 11 | 1 | 1 | 1 | 0 | 1 |  |  | 0 | 0 | 01 | 10 | 01 | 11 | 1 | 1 | 1 | 11 | 10 | 0 | 0 | 10 | 0 |  | 1 |  | 22 |
| 45 |  | 0 | 0 | 01 | 11 | 10 | 0 | 0 | 1 | 0 | 0 | 0 |  | 0 | 0 | 0 | 00 | 00 | 00 | 00 | 00 | 0 | 10 | 0 | 10 | 01 | 1 | 0 | 0 | 0 | 0 |  | 8 |
| 46 | $1$ |  |  |  |  |  |  | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 01 | 10 | 00 | 0 | 0 | 0 | 1 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 |  | 12 |
| 47 |  |  |  |  |  |  |  |  | 0 | 0 | 1 |  |  |  |  |  |  | 00 | 00 | 0 |  | 11 | 11 | 0 | 0 | 0 | 1 | 10 | 0 | 11 | 10 |  | 15 |
| 48 |  |  |  |  |  |  |  |  | 1 | 1 | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  | 11 | 1 | 11 | 10 | , | 0 | 1 |  |  | 25 |
| Correct |  | 040 | 027 | 743 | 4313 |  |  | 283 | 314 | 411 | 1112 | 26 |  | 27 |  |  | 1435 | 5113 |  | 27.29 | 2930 |  |  |  | 382 | 2930 | 301 | 111 | 112 | 293 |  |  |  |
| 1 |  | 848 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## APPENDIX E

THE CALCULATION OF t-TEST FOR PRE-TEST

| No. | Class A (Experimental) |  | Class B (Control) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | XA | $\mathrm{X}^{2} \mathrm{~A}$ | XB | $\mathrm{X}^{2} \mathrm{~B}$ |
| 1 | 8 | 64 | 10 | 100 |
| 2 | 17 | 289 | 18 | 324 |
| 3 | 19 | 361 | 17 | 289 |
| 4 | 21 | 441 | 24 | 576 |
| 5 | 17 | 289 | 19 | 361 |
| 6 | 19 | 361 | 21 | 441 |
| 7 | 9 | 81 | 14 | 196 |
| 8 | 8 | 64 | 18 | 324 |
| 9 | 10 | 100 | 24 | 576 |
| 10 | 17 | 289 | 27 | 729 |
| 11 | 19 | 361 | 15 | 225 |
| 12 | 9 | 81 | 19 | 361 |
| 13 | 19 | 361 | 8 | 64 |
| 14 | 20 | 400 | 21 | 441 |
| 15 | 15 | 225 | 22 | 484 |
| 16 | 19 | 361 | 9 | 81 |
| 17 | 18 | 324 | 18 | 324 |
| 18 | 17 | 289 | 15 | 225 |
| 19 | 10 | 100 | 8 | 64 |
| 20 | 25 | 625 | 11 | 121 |
| 21 | 20 | 400 | 12 | 144 |
| 22 | 22 | 484 | 12 | 144 |
| 23 | 22 | 484 | 15 | 225 |
| 24 | 18 | 324 | 9 | 81 |
| 25 | 16 | 256 | 11 | 121 |
| 26 | 23 | 529 | 9 | 81 |
| 27 | 17 | 289 | 11 | 121 |
| 28 | 14 | 196 | 11 | 12.1 |
| 29 | 10 | 100 | 15 | 225 |
| 30 | 23 | 529 | 12 | 144 |
| 31 | 17 | 289 | 14 | 196 |
| 32 | 13 | 169 | 12 | 144 |
| 33 | 13 | 169 | 22 | 484 |
| 34 | 14 | 196 | 10 | 100 |
| 35 | 7 | 49 | 20 | 400 |
| 36 | 15 | 225 | 15 | 225 |
| 37 | 9 | 81 | 14 | 196 |
| 38 | 9 | 81 | 10 | 100 |
| 39 | 18 | 324 | 21 | 441 |
| 40 | 20 | 400 | 20 | 400 |
| 41 | 14 | 196 | 21 | 441 |
| 42 | 20 | 400 | 13 | 169 |
| 43 | 20 | 400 | 20 | 400 |
| 44 | 15 | 225 | 20 | 400 |
| 45 | 10 | 100 | 11 | 121 |
| Total | 715 | 12361 | 698 | 11930 |
| n | 45 | - | 45 | - |
| Mean | 15.888889 | - | 15.511111 | - |
| SD | 4.768475 | - | 5.3466251 | - |

## TEST OF HYPOTHESES:

Ho : $\quad \mu \mathrm{A}=\mu \mathrm{B}$, there is no significant difference between the mean groups.
$\mathrm{Ha} \quad: \quad \mu \mathrm{A} \neq \mu \mathrm{B}$, there is a significant difference between mean groups.
t -test, where $\mathrm{df}=\mathrm{nA}+\mathrm{nB}-2=88$
$\mathrm{t}(5 \%)=2.000$

## Calculation for t observation (to):

## A : EXPERIMENT

$$
\begin{aligned}
& \bar{x}=\frac{\sum x}{n}=15.8889 \quad \mathrm{n}=45 \\
& s=\sqrt{\frac{n\left(x^{2}-\left(\sum x\right)^{2}\right.}{n(n-1)}}=4.7684
\end{aligned}
$$

B : CONTROL

$$
\bar{x}=\frac{\sum x}{n} \quad=15.5111 \quad \mathrm{n}=45
$$

$$
s=\sqrt{\frac{n\left(x^{2}-\left(\sum x\right)^{2}\right.}{n(n-1)}}=5.3466
$$

$$
t_{0}=\frac{\bar{x}_{A}-\bar{x}_{B}}{\sqrt{\frac{\left(n_{A}-1\right) s_{A}^{2}+\left(n_{B}-1\right) s_{B}^{2}}{n_{A}+n_{B}-2}\left(\frac{1}{n A}+\frac{1}{n B}\right)}}=0.3537
$$

Conclusion:
Because | t observation| less than t table thus Ho is accepted.
Therefore, we conclude that at a $5 \%$ level there is no significant difference between groups.

## APPENDIX F

THE CALCULATION OF t-TEST FOR POST-TEST

| No. | Class A (Experimental) |  | Class B (Control) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | XA | $\mathrm{X}^{2} \mathrm{~A}$ | XB | $\mathrm{X}^{2} \mathrm{~B}$ |
| 1 | 10 | 100 | 19 | 361 |
| 2 | 25 | 625 | 25 | 625 |
| 3 | 24 | 576 | 25 | 625 |
| 4 | 24 | 576 | 26 | 676 |
| 5 | 20 | 400 | 17 | 289 |
| 6 | 17 | 289 | 19 | 361 |
| 7 | 17 | 289 | 20 | 400 |
| 8 | 10 | 100 | 22 | 484 |
| 9 | 23 | 529 | 27 | 729 |
| 10 | 28 | 784 | 26 | 676 |
| 11 | 28 | 784 | 14 | 196 |
| 12 | 26 | 676 | 18 | 324 |
| 13 | 22 | 484 | 17 | 289 |
| 14 | 23 | 529 | 20 | 400 |
| 15 | 20 | 400 | 22 | 484 |
| 16 | 23 | 529 | 12 | 144 |
| 17 | 25 | 625 | 23 | 529 |
| 18 | 27 | 729 | 17 | 289 |
| 19 | 20 | 400 | 10 | 100 |
| 20 | 28 | 784 | 10 | 100 |
| 21 | 25 | 625 | 13 | 169 |
| 22 | 27 | 729 | 10 | 100 |
| 23 | 22 | 484 | 18 | 324 |
| 24 | 21 | 441 | 10 | 100 |
| 25 | 20 | 400 | 14 | 196 |
| 26 | 28 | 784 | 16 | 256 |
| 27 | 18 | 324 | 9 | 81 |
| 28 | 22 | 484 | 12 | 144 |
| 29 | 15 | 225 | 17 | 289 |
| 30 | 23 | 529 | 11 | 121 |
| 31 | 21 | 441 | 16 | 256 |
| 32 | 23 | 529 | 16 | 256 |
| 33 | 23 | 529 | 22 | 484 |
| 34 | 25 | 625 | 8 | 64 |
| 35 | 19 | 361 | 12 | 144 |
| 36 | 22 | 484 | 14 | 196 |
| 37 | 10 | 100 | 21 | 441 |
| 38 | 8 | 64 | 19 | 361 |
| 39 | 24 | 576 | 22 | 484 |
| 40 | 27 | 729 | 16 | 256 |
| 41 | 27 | 729 | 24 | 576 |
| 42 | 24 | 576 | 6 | 36 |
| 43 | 28 | 784 | 16 | 256 |
| 44 | 28 | 784 | 15 | 225 |
| 45 | 14 | 196 | 19 | 361 |
| Total | 984 | 22740 | 765 | 14257 |
| n | 45 | - | 45 | - |
| Mean | 21.866667 | - | 17 | - |
| SD | 5.27257 | - | 5.3343 | - |

## TEST OF HYPOTHESES:

Ho : $\quad \mu \mathrm{A}=\mu \mathrm{B}$, there is no significant difference between the mean groups.
$\mathrm{Ha} \quad: \quad \mu \mathrm{A}>\mu \mathrm{B}$, mean score of A group is greater than B group.
t -test, where $\mathrm{df}=\mathrm{nA}+\mathrm{nB}-2=88$
$\mathrm{t}(5 \%)=1.671$
Calculation for t observation (to):

## A : EXPERIMENT

$$
\begin{aligned}
& \bar{x}=\frac{\sum x}{n}=21.8667 \quad \mathrm{n}=45 \\
& s=\sqrt{\frac{n\left(x^{2}-\left(\sum x\right)^{2}\right.}{n(n-1)}}=5.27257
\end{aligned}
$$

B : CONTROL

$$
\bar{x}=\frac{\sum x}{n} \quad=17 \quad \mathrm{n}=45
$$

$$
s=\sqrt{\frac{n\left(x^{2}-\left(\sum x\right)^{2}\right.}{n(n-1)}}=5.3343
$$

$$
t_{0}=\frac{\bar{x}_{A}-\bar{x}_{B}}{\sqrt{\frac{\left(n_{A}-1\right) s_{A}^{2}+\left(n_{B}-1\right) s_{B}^{2}}{n_{A}+n_{B}-2}\left(\frac{1}{n A}+\frac{1}{n B}\right)}}=4.3527
$$

Conclusion:
Because $t$ observation more than $t$ table thus Ho is rejected.
Hence we conclude that the difference between groups is significant, and that the A group is greater.

## APPENDIX G

THE CALCULATION OF t-TEST FOR DETAIL QUESTIONS

| No. | Class A (Experimental) |  | Class B (Control) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | XA | $\mathrm{X}^{2} \mathrm{~A}$ | XB | $\mathrm{X}^{2} \mathrm{~B}$ |
| 1 | 5 | 25 | 7 | 49 |
| 2 | 12 | 144 | 10 | 100 |
| 3 | 12 | 144 | 10 | 100 |
| 4 | 10 | 100 | 11 | 121 |
| 5 | 9 | 81 | 6 | 36 |
| 6 | 7 | 49 | 10 | 100 |
| 7 | 9 | 81 | 9 | 81 |
| 8 | 4 | 16 | 11 | 121 |
| 9 | 11 | 121 | 11 | 121 |
| 10 | 12 | 144 | 11 | 121 |
| 11 | 12 | 144 | 9 | 81 |
| 12 | 12 | 144 | 7 | 49 |
| 13 | 10 | 100 | 6 | 36 |
| 14 | 10 | 100 | 10 | 100 |
| 15 | 11 | 121 | 9 | 81 |
| 16 | 11 | 121 | 5 | 25 |
| 17 | 11 | 121 | 12 | 144 |
| 18 | 13 | 169 | 10 | 100 |
| 19 | 9 | 81 | 6 | 36 |
| 20 | 12 | 144 | 4 | 16 |
| 21 | 11 | 121 | 6 | 36 |
| 22 | 12 | 144 | 6 | 36 |
| 23 | 9 | 81 | 9 | 81 |
| 24 | 9 | 81 | 6 | 36 |
| 25 | 8 | 64 | 4 | 16 |
| 26 | 12 | 144 | 8 | 64 |
| 27 | 8 | 64 | 4 | 16 |
| 28 | 10 | 100 | 7 | 49 |
| 29 | 7 | 49 | 10 | 100 |
| 30 | 11 | 121 | 6 | 36 |
| 31 | 11 | 121 | 8 | 64 |
| 32 | 12 | 144 | 8 | 64 |
| 33 | 10 | 100 | 12 | 144 |
| 34 | 11 | 121 | 5 | 25 |
| 35 | 9 | 81 | 7 | 49 |
| 36 | 9 | 81 | 10 | 100 |
| 37 | 4 | 16 | 12 | 144 |
| 38 | 3 | 9 | 7 | 49 |
| 39 | 11 | 121 | 11 | 121 |
| 40 | 13 | 169 | 9 | 81 |
| 41 | 12 | 144 | 11 | 121 |
| 42 | 10 | 100 | 3 | 9 |
| 43 | 12 | 144 | 9 | 81 |
| 44 | 12 | 144 | 10 | 100 |
| 45 | 6 | 36 | 10 | 100 |
| Total | 444 | 4650 | 372 | 3340 |
| $n$ | 45 | - | 45 | -- |
| Mean | 9.8666667 | - | 8.2666667 | - |
| SD | 2.4734955 | - | 2.4531979 | - |

## TEST OF HYPOTHESES:

Ho : $\quad \mu \mathrm{A}=\mu \mathrm{B}$, there is no significant difference between the mean groups.
Ha $\quad: \quad \mu \mathrm{A}>\mu \mathrm{B}$, mean score of A group is greater than B group.
t -test, where $\mathrm{df}=\mathrm{nA}+\mathrm{nB}-2=88$
$\mathrm{t}(5 \%)=1.671$

## Calculation for $t$ observation (to):

A : EXPERIMENT

$$
\begin{aligned}
& \bar{x}=\frac{\sum x}{n}=9.8667 \quad \mathrm{n}=45 \\
& s=\sqrt{\frac{n\left(x^{2}-\left(\sum x\right)^{2}\right.}{n(n-1)}}=2.473
\end{aligned}
$$

B : CONTROL

$$
\bar{x}=\frac{\sum x}{n} \quad=\quad 8.2667 \quad \mathrm{n}=45
$$

$$
s=\sqrt{\frac{n\left(x^{2}-\left(\sum x\right)^{2}\right.}{n(n-1)}}=2.4532
$$

$$
t_{O}=\frac{\bar{x}_{A}-\bar{x}_{B}}{\sqrt{\frac{\left(n_{A}-1\right) s_{A}^{2}+\left(n_{B}-1\right) s_{B}^{2}}{n_{A}+n_{B}-2}\left(\frac{1}{n A}+\frac{1}{n B}\right)}}=3.0809
$$

Conclusion:
Because $t$ observation more than $t$ table thus Ho is rejected.
Hence we conclude that the difference between groups is significant, and that the A group is greater.

## APPENDIX H

THE CALCULATION OF t-TEST FOR VOCABULARY QUESTIONS

| No. | Class A(Experimental) |  | Class B (Control) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | XA | $\mathrm{X}^{2} \mathrm{~A}$ | XB | $\mathrm{X}^{2} \mathrm{~B}$ |
| 1 | 4 | 16 | 9 | 81 |
| 2 | 8 | 64 | 10 | 100 |
| 3 | 7 | 49 | 10 | 100 |
| 4 | 9 | 81 | 10 | 100 |
| 5 | 7 | 49 | 9 | 81 |
| 6 | 6 | 36 | 5 | 25 |
| 7 | 4 | 16 | 7 | 49 |
| 8 | 4 | 16 | 7 | 49 |
| 9 | 8 | 64 | 11 | 121 |
| 10 | 11 | 121 | 10 | 100 |
| 11 | 11 | 121 | 4 | 16 |
| 12 | 10 | 100 | 7 | 49 |
| 13 | 9 | 81 | 7 | 49 |
| 14 | 9 | 81 | 6 | 36 |
| 15 | 5 | 25 | 8 | 64 |
| 16 | 9 | 81 | 3 | 9 |
| 17 | 9 | 81 | 7 | 49 |
| 18 | 9 | 81 | 3 | 9 |
| 19 | 8 | 64 | 3 | 9 |
| 20 | 11 | 121 | 4 | 16 |
| 21 | 9 | 81 | 4 | 16 |
| 22 | 11 | 121 | 2 | 4 |
| 23 | 9 | 81 | 7 | 49 |
| 24 | 8 | 64 | 2 | 4 |
| 25 | 8 | 64 | 7 | 49 |
| 26 | 11 | 121 | 5 | 25 |
| 27 | 7 | 49 | 4 | 16 |
| 28 | 8 | 64 | 3 | 9 |
| 29 | 5 | 25 | 4 | 16 |
| 30 | 8 | 64 | 3 | 9 |
| 31 | 6 | 36 | 6 | 36 |
| 32 | 7 | 49 | 6 | 36 |
| 33 | 9 | 81 | 6 | 36 |
| 34 | 10 | 100 | 2 | 4 |
| 35 | 6 | 36 | 4 | 16 |
| 36 | 9 | 81 | 3 | 9 |
| 37 | 3 | 9 | 5 | 25 |
| 38 | 2 | 4 | 9 | 81 |
| 39 | 10 | 100 | 7 | 49 |
| 40 | 11 | 121 | 6 | 36 |
| 41 | 11 | 121 | 8 | 64 |
| 42 | 11 | 121 | 2 | 4 |
| 43 | 12 | 144 | 5 | 25 |
| 44 | 12 | 144 | 3 | 9 |
| 45 | 6 | 36 | 6 | 36 |
| Total | 367 | 3265 | 259 | 1775 |
| n | 45 | - | 45 | - |
| Mean | 8.1555556 | - | 5.7555556 | - |
| SD | 2.48592 | - | 2.5419709 | - |

## TEST OF HYPOTHESES:

Ho : $\quad \mu \mathrm{A}=\mu \mathrm{B}$, there is no significant difference between the mean groups.
$\mathrm{Ha} \quad: \quad \mu \mathrm{A}>\mu \mathrm{B}$, mean score of A group is greater than B group.
t -test, where $\mathrm{df}=\mathrm{nA}+\mathrm{nB}-2=88$
$\mathrm{t}(5 \%)=1.671$
Calculation for tobservation (to):
A : EXPERIMENT

$$
\begin{aligned}
& \bar{x}=\frac{\sum x}{n}=8.156 \quad \mathrm{n}=45 \\
& s=\sqrt{\frac{n\left(x^{2}-\left(\sum x\right)^{2}\right.}{n(n-1)}}=2.4859
\end{aligned}
$$

B : CONTROL

$$
\bar{x}=\frac{\sum x}{n} \quad=\quad 5.7556 \quad \mathrm{n}=45
$$

$$
s=\sqrt{\frac{n\left(x^{2}-\left(\sum x\right)^{2}\right.}{n(n-1)}}=2.54197
$$

$$
t_{O}=\frac{\bar{x}_{A}-\bar{x}_{B}}{\sqrt{\frac{\left(n_{A}-1\right) s_{A}^{2}+\left(n_{B}-1\right) s_{B}^{2}}{n_{A}+n_{B}-2}\left(\frac{1}{n A}+\frac{1}{n B}\right)}}=4.5281
$$

Conclusion:
Because $t$ observation more than $t$ table thus Ho is rejected.
Hence we conclude that the difference between groups is significant, and that the A group is greater.

## APPENDIX I

THE CALCULATION OF t-TEST FOR REFERENCE WORD QUESTIONS

| No. | Class A (Experimental) |  | Class B (Control) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | XA | $\mathrm{X}^{2} \mathrm{~A}$ | XB | $\mathrm{X}^{2} \mathrm{~B}$ |
| 1 | 1 | 1 | 2 | 4 |
| 2 | 3 | 9 | 3 | 9 |
| 3 | 3 | 9 | 3 | 9 |
| 4 | 3 | 9 | 3 | 9 |
| 5 | 2 | 4 | 2 | 4 |
| 6 | 2 | 4 | 2 | 4 |
| 7 | 2 | 4 | 3 | 9 |
| 8 | 2 | 4 | 2 | 4 |
| 9 | 2 | 4 | 3 | 9 |
| 10 | 3 | 9 | 3 | 9 |
| 11 | 3 | 9 | 1 | 1 |
| 12 | 3 | 9 | 2 | 4 |
| 13 | 3 | 9 | 2 | 4 |
| 14 | 3 | 9 | 2 | 4 |
| 15 | 3 | 9 | 3 | 9 |
| 16 | 2 | 4 | 2 | 4 |
| 17 | 3 | 9 | 3 | 9 |
| 18 | 3. | 9 | 3 | 9 |
| 19 | 2 | 4 | 1 | 1 |
| 20 | 3 | 9 | 2 | 4 |
| 21 | 3 | 9 | 2 | 4 |
| 22 | 3 | 9 | 1 | 1 |
| 23 | 3 | 9 | 2 | 4 |
| 24 | 2 | 4 | 1 | 1 |
| 25 | 2 | 4 | 3 | 9 |
| 26 | 3 | 9 | 2 | 4 |
| 27 | 3 | 9 | 0 | 0 |
| 28 | 2 | 4 | 1 | 1 |
| 29 | 1 | 1 | 2 | 4 |
| 30 | 2 | 4 | 2 | 4 |
| 31 | 2 | 4 | 2 | 4 |
| 32 | 2 | 4 | 2 | 4 |
| 33 | 2 | 4 | 3 | 9 |
| 34 | 2. | 4 | 1 | 1 |
| 35 | 2 | 4 | 1 | 1 |
| 36 | 3 | 9 | 1 | 1 |
| 37 | 2 | 4 | 2 | 4 |
| 38 | 2 | 4 | 1 | 1 |
| 39 | 1 | 1 | 3 | 9 |
| 40 | 1 | 1 | 1 | 1 |
| 41 | 2 | 4 | 3 | 9 |
| 42 | 2 | 4 | 1 | 1 |
| 43 | 2 | 4 | 1 | 1 |
| 44 | 2 | 4 | 1 | 1 |
| 45 | 0 | 0 | 1 | 1 |
| Total | 102 | 254 | 87 | 199 |
| n | 45 | - | 45 | - |
| Mean | 2.2666667 | - | 1.9333333 | - |
| SD | 0.7198485 | - | 0.83666 | - |

## TEST OF HYPOTHESES:

Ho : $\quad \mu \mathrm{A}=\mu \mathrm{B}$, there is no significant difference between the mean groups.
Ha : $\quad \mu \mathrm{A}>\mu \mathrm{B}$, mean score of A group is greater than B group.
t-test, where $\mathrm{df}=\mathrm{nA}+\mathrm{nB}-2=88$
$\mathrm{t}(5 \%)=1.671$

## Calculation for tobservation (to):

A : EXPERIMENT

$$
\begin{aligned}
& \bar{x}=\frac{\sum x}{n}=2.2667 \quad \mathrm{n}=45 \\
& s=\sqrt{\frac{n\left(x^{2}-\left(\sum x\right)^{2}\right.}{n(n-1)}}=0.7198
\end{aligned}
$$

B : CONTROL

$$
\bar{x}=\frac{\sum x}{n} \quad=1.9333 \quad \mathrm{n}=45
$$

$$
s=\sqrt{\frac{n\left(x^{2}-\left(\sum x\right)^{2}\right.}{n(n-1)}}=0.83666
$$

$$
t_{0}=\frac{\bar{x}_{A}-\bar{x}_{B}}{\sqrt{\frac{\left(n_{A}-1\right) s_{A}^{2}+\left(n_{B}-1\right) s_{B}^{2}}{n_{A}+n_{B}-2}\left(\frac{1}{n A}+\frac{1}{n B}\right)}}=2.0259
$$

Conclusion:
Because t observation more than $t$ table thus Ho is rejected.
Hence we conclude that the difference between groups is significant, and that the A group is greater.

## APPENDIX J

THE CALCULATION OF t-TEST FOR MAIN IDEA QUESTIONS

| No. | Class A (Experimental) |  | Class B (Control) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | XA | $\mathrm{X}^{2} \mathrm{~A}$ | XB | $\mathrm{X}^{2} \mathrm{~B}$ |
| 1 | 0 | 0 | 1 | 1 |
| 2 | 2 | 4 | 2 | 4 |
| 3 | 2 | 4 | 2 | 4 |
| 4 | 2 | 4 | 2 | 4 |
| 5 | 2 | 4 | 0 | 0 |
| 6 | 2 | 4 | 2 | 4 |
| 7 | 2 | 4 | 1 | 1 |
| 8 | 0 | 0 | 2 | 4 |
| 9 | 2 | 4 | 2 | 4 |
| 10 | 2 | 4 | 2 | 4 |
| 11 | 2 | 4 | 0 | 0 |
| 12 | 1 | 1 | 2 | 4 |
| 13 | 0 | 0 | 2 | 4 |
| 14 | 1 | 1 | 2 | 4 |
| 15 | 1 | 1 | 2 | 4 |
| 16 | 1 | 1 | 2 | 4 |
| 17 | 2 | 4 | 1 | 1 |
| 18 | 2 | 4 | 1 | 1 |
| 19 | 1 | 1 | 0 | 0 |
| 20 | 2 | 4 | 0 | 0 |
| 21 | 2 | 4 | 1 | 1 |
| 22 | 1 | 1 | 1 | 1 |
| 23 | 1 | 1 | 0 | 0 |
| 24 | 2 | 4 | 1 | 1 |
| 25 | 2 | 4 | 0 | 0 |
| 26 | 2 | 4 | 1 | 1 |
| 27 | 0 | 0 | 1 | 1 |
| 28 | 2 | 4 | 1 | 1 |
| 29 | 2 | 4 | 1 | 1 |
| 30 | 2 | 4 | 0 | 0 |
| 31 | 2 | 4 | 0 | 0 |
| 32 | 2 | 4 | 0 | 0 |
| 33 | 2 | 4 | 1 | 1 |
| 34 | 2 | 4 | 0 | 0 |
| 35 | 2 | 4 | 0 | 0 |
| 36 | 1 | 1 | 0 | 0 |
| 37 | 1 | 1 | 2 | 4 |
| 38 | 1 | 1 | 2 | 4 |
| 39 | 2 | 4 | 1 | 1 |
| 40 | 2 | 4 | 0 | 0 |
| 41 | 2 | 4 | 2 | 4 |
| 42 | 1 | 1 | 0 | 0 |
| 43 | 2 | 4 | 1 | 1 |
| 44 | 2 | 4 | 1 | 1 |
| 45 | 2 | 4 | 2 | 4 |
| Total | 71 | 131 | 47 | 79 |
| n | 45 | - | 45 | - |
| Mean | 1.5777778 | - | 1.0444444 | - |
| SD | 0.6567443 | - | 0.8244986 | - |

## TEST OF HYPOTHESES:

Ho : $\quad \mu \mathrm{A}=\mu \mathrm{B}$, there is no significant difference between the mean groups.
Ha $\quad: \quad \mu \mathrm{A}>\mu \mathrm{B}$, mean score of A group is greater than B group.
t -test, where $\mathrm{df}=\mathrm{nA}+\mathrm{nB}-2=88$
$\mathrm{t}(5 \%)=1.671$

## Calculation for tobservation (to):

## A : EXPERIMENT

$$
\begin{aligned}
& \bar{x}=\frac{\sum x}{n}=1.5778 \quad \mathrm{n}=45 \\
& s=\sqrt{\frac{n\left(x^{2}-\left(\sum x\right)^{2}\right.}{n(n-1)}}=0.656744
\end{aligned}
$$

B : CONTROL

$$
\begin{aligned}
& \bar{x}=\frac{\sum x}{n}=1.0444 \quad \mathrm{n}=45 \\
& s=\sqrt{\frac{n\left(x^{2}-\left(\sum x\right)^{2}\right.}{n(n-1)}}=0.8245 \\
& t_{0}=\frac{\bar{x}_{A}-\bar{x}_{B}}{\sqrt{\frac{\left(n_{A}-1\right) s_{A}^{2}+\left(n_{B}-1\right) s_{B}^{2}}{n_{A}+n_{B}-2}\left(\frac{1}{n A}+\frac{1}{n B}\right)}}=3.39411
\end{aligned}
$$

Conclusion:
Because $t$ observation more than $t$ table thus Ho is rejected.
Hence we conclude that the difference between groups is significant, and that the A group is greater.

## APPENDIX K

Critical Values of the $t$ Distribution

| Df | Alpha ( $\alpha$ ) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0.100 | 0.050 | 0.025 | 0.010 | 0.005 |
| 1 | 3.078 | 6.314 | 12.706 | 31.821 | 63.657 |
| 2 | 1.886 | 2.920 | 4.303 | 6.965 | 9.925 |
| 3 | 1.638 | 2.353 | 3.182 | 4.541 | 5.841 |
| 4 | 1.533 | 2.132 | 2.776 | 3.747 | 4.604 |
| 5 | 1.476 | 2.015 | 2.571 | 3.365 | 4.032 |
| 6 | 1.440 | 1.943 | 2.447 | 3.143 | 3.707 |
| 7 | 1.418 | 1.895 | 2.365 | 2.998 | 3.499 |
| 8 | 1.397 | 1.860 | 2.306 | 2.896 | 3.355 |
| 9 | 1.383 | 1.833 | 2.620 | 2.821 | 3.250 |
| 10 | 1.372 | 1.812 | 2.228 | 2.764 | 3.169 |
| 11 | 1.363 | 1.796 | 2.201 | 2.718 | 3.106 |
| 12 | 1.356 | 1.782 | 2.179 | 2.681 | 3.055 |
| 13 | 1.350 | 1.771 | 2.168 | 2.650 | 3.012 |
| 14 | 1.345 | 1.761 | 2.145 | 2.624 | 2.977 |
| 15 | 1.341 | 1.753 | 2.131 | 2.602 | 2.947 |
| 16 | 1.337 | 1.746 | 2.120 | 2.583 | 2.921 |
| 17 | 1.333 | 1.740 | 2.110 | 2.567 | 2.898 |
| 18 | 1.333 | 1.743 | 2.101 | 2.552 | 2.878 |
| 19 | 1.328 | 1.729 | 2.093 | 2.639 | 2.861 |
| 20 | 1.325 | 1.725 | 2.086 | 2.528 | 2.845 |
| 21 | 1.323 | 1.721 | 2.080 | 2.518 | 2.851 |
| 22 | 1.321 | 1.717 | 2.074 | 2.508 | 2.819 |
| 23 | 1.319 | 1.714 | 2.069 | 2.500 | 2.807 |
| 24 | 1.318 | 1.711 | 2.064 | 2.492 | 2.797 |
| 25 | 1.316 | 1.708 | 2.060 | 2.485 | 2.787 |
| 26 | 1.315 | 1.706 | 2.042 | 2.457 | 2.779 |
| 27 | 1.314 | 1.703 | 2.052 | 2.473 | 2.771 |
| 28 | 1.131 | 1.701 | 2.048 | 2.467 | 2.763 |
| 29 | 1.311 | 1.699 | 2.045 | 2.462 | 2.756 |
| 30 | 1.310 | 1.697 | 2.042 | 2.457 | 2.750 |
| 40 | 1.303 | 1.684 | 2.021 | 2.423 | 2.704 |
| 60 | 1.296 | 1.671 | 2.000 | 2.390 | 2.660 |
| 120 | 1.289 | 1.658 | 1.980 | 2.358 | 2.617 |
| inf | 1.382 | 1.645 | 1.960 | 2.326 | 2.576 |

Source: Arcana, 1996:134

Notes:
Df: degree of freedom

## APPENDIX L <br> LESSON PLAN FOR THE FIRST TREATMENT

## LESSON PLAN

(Control group, meeting one)

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Mass Media |
| Sub Theme | $:$ Television |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

## A. Competence

1. Basic Competence

Reading : Students are able to get some information from the reading text about television
2. Achievement Indicator

Students are able to:

- read the text with the correct pronunciation.
- answer the meaning of the vocabularies found in the text.
- answer comprehension questions about the text orally.
- answer the multiple choice questions related to the text.


## B. Learning Materials

- Reading text "Is television a good or bad thing?" adapted from English for Communication for Junior High School Grade 3, page 68.
- Media: Hand out, picture


## C. Teaching and Learning Activities <br> 1. Approach:

- Communicative Approach
- Competency Based Approach

2. Techniques

- Question and answer
- Explanation
- Discussion

3. Class Activities:

CONTROL GROUP
Pre-Reading Activities

1. Students are asked to answer some triggering questions about the picture sticked on the whiteboard orally.

## Whilst-Reading Activities

2. Students are asked to listen to the teacher's reading the text.
3. Students are asked to read the text aloud paragraph by paragraph.
4. Students are asked to find difficult words in the text.
5. Students are asked to listen to the teacher's explaining the meaning of the difficult words.
6. Students are asked to answer some comprehension questions related to the text orally.

## Post-Reading Activities

7. Students are asked to answer the multiple choice questions.
8. Students are asked to discuss the answer of the multiple choice questions.
9. Students are asked to listen to the teacher's reviewing the text.
D. Assessment
$>$ Students are asked to answer the comprehension questions in the form of multiple choices.

## E. References/Resources:

Heasley, Brandon.2003.English for Communication. Jakarta. Erlangga.

## The Steps

| Procedures | Skills / Components | Teacher's Activities | Students' Activities | Time |
| :---: | :---: | :---: | :---: | :---: |
| Pre-Reading <br> Activities | Speaking <br> Listening | 1. Teacher greets the students and mentions the topic of the lesson that day. <br> 2. Teacher asks the students to look at the picture sticked on the whiteboard. <br> 3. Teacher asks the students some triggering questions related to the topic of the reading text orally. <br> 4. Teacher gives comments on the students' answers. <br> 5. Teacher distributes the student's worksheet. | 1. Students respond to the teacher's greeting. <br> 2. Students look at the picture on the whiteboard. <br> 3. Students answer teacher's questions orally. <br> 4. Students listen to the teacher's comments. <br> 5. Students receive the worksheet. | $1{ }^{\prime}$ |

\begin{tabular}{|c|c|c|c|c|}
\hline \begin{tabular}{l}
Whilst- \\
Reading \\
Activities
\end{tabular} \& \begin{tabular}{l}
Listening \\
Reading \\
Reading \\
Speaking \\
Listening
\end{tabular} \& \begin{tabular}{l}
1. Teacher reads the text for the students. \\
2. Teacher asks some students to read aloud the text, paragraph by paragraph. \\
3. Teacher explains the difficult words that the students find in the text. \\
4. Teacher asks some comprehension questions about the text orally.
\end{tabular} \& \begin{tabular}{l}
1. Students listen carefully to the teacher. \\
2. Students read the text. \\
3. Students ask the difficult words that they find in the text. \\
4. Students answer teacher's questions orally.
\end{tabular} \& 4
\(5^{\prime}\)

5

5 <br>

\hline Post-Reading Activities \& Writing Listening Speaking \& | 1. Teacher asks the students to do the assessment (answering reading comprehension questions in the form of multiple choice questions). |
| :--- |
| 2. Teacher discusses the answer with the students. |
| 3. Teacher gives comments on the students' work. |
| 4. Teacher closes the lesson by reviewing the reading text. | \& | 1. Students do the assessment. |
| :--- |
| 2. Students discuss the answer with the teacher. |
| 3. Students listen to the teacher's comment. |
| 4. Students listen to the teacher. | \& $10^{\prime}$ <br>

\hline
\end{tabular}

## Students' Worksheet

## READ THE TEXT CAREFULLY!

## Is television a good or bad thing?

People have different ideas about television. Some say that television will help educate our young people. Other people say that television is bad for young people.

The people who support television say that television is a great teacher. We can learn about other countries and other cultures from television. Television can teach us about science, technology, the arts and politics. We can learn anything from television. Moreover, television provides us a good entertainment that can make us relaxed from our tiring days.

The other people who are against television say that watching television is a drug (candu). It makes us not doing our other activities, or even having exercise. Television also has so many commercials that might change our modest lifestyle to be more consumptive. People mention that criminal programs on television sometimes influence our teenagers' behavior. They also say that television is changing our Indonesian culture. It is making us a part of the global village.

What is the truth? Is television good or bad? The truth is that television has changed our lives, but so have the motor car, the computer, the telephone, and many other things. The car transports us from place to place, but it also kills people (car crashes) and causes air pollution. Television also has advantages and disadvantages, but the advantages are more than the disadvantages.

## Assessment <br> CHOOSE THE CORRECT ANSWER!

1. What are the different ideas about television?
a. Television is educational
b. Television is dangerous
c. Television is both educational and dangerous
d. Television is entertaining and sometimes boring
2. Supporters say that using television we can learn:
a. science
c. the arts
b. technology
d. everything
3. People who are against television say:
a. television will make us ill
b. television is too expensive
c. television is changing our people
d. television is boring
4. What does "they" in the third paragraph refer to?
a. people who are against television
c. televisions
b. passive people
d. drugs
5. The word change in the fourth paragraph means:
a. move
c. opportunity
b. alter
d. destroy
6. The word transport in the fourth paragraph means:
a. move
c. opportunity
b. alter
d. destroy
7. Why is television a drug?
a. It contains dangerous materials.
b. It makes us drug users.
c. It makes us cannot stop watching it.
d. It is dangerous for our body.
8. The main idea of the last paragraph is:
a. Television is a good thing. c. Television changed our lives.
b. Television is like a car.
d. Television is a bad thing.
9. What is the effect of criminal program on teenagers?
a. They ignore it.
c. They believe it.
b. They imitate it.
d. They don't watch it.
10. Is television a good or bad? What does the writer think?
a. Television kills people.
b. Television has not changed the way we live.
c. Television is more good than bad.
d. Television causes air pollution.

## Teacher's Note

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Mass Media |
| Sub Theme | $:$ Television |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

## I. Learning Outcomes

1. The students are able to comprehend the information in the reading text.
2. The students are able to answer reading comprehension questions in the form of multiple choices.

## II. Pre-Instructional Activities

a. The teacher greets the students and mentions the topic of the lesson.

Teacher : Good morning, students!
Students : Good morning.
Teacher : How are you today?
Students : Fine, thanks.
Teacher : Today, we're going to learn about television.
b. The teacher asks the students to look at the picture sticked on the whiteboard.
c. The teacher asks the students some triggering questions related to the topic of the reading text.

1. How many persons are the in the picture?
2. What are they doing?
3. Do you also like to watch TV?
4. How many TV stations do you know of? What are they?
5. What programs do you like to watch?
6. Do you think watching TV is a good activity? Why?

## III. Whilst-Instructional Activities

a. The teacher reads the text for the student.
b. The teacher asks some student to read the text, paragraph by paragraph.
c. The teacher asks the students to find the difficult words in the text.
d. The teacher explains the meaning of the difficult words found in the text.
e. The teacher asks some comprehension questions related to the text orally.

1. What is the main idea of the text?
2. Does everybody agree that TV is good?
3. What are the good sides about TV?
4. Mention some bad sides about TV!
5. Do you think the writer agrees that TV is bad?

## IV. Post- Instructional Activities

a. The teacher asks the students to answer ten multiple choice questions related to the text.
b. The teacher discusses the answer of the questions with the students.
c. The teacher gives comments on the students' work.
b. The teacher closes the lesson by reviewing the reading text.


TRIGGERING QUESTIONS:

1. How many persons are the in the picture?
2. What are they doing?
3. Do you also like to watch TV?
4. How many TV stations do you know of? What are they?
5. What programs do you like to watch?
6. Do you think watching TV is a good activity? Why?

## Answer Key

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Mass Media |
| Sub Theme | $:$ Television |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

The possible answers for the triggering questions:

1. There are three persons.
2. They are watching TV.
3. Yes, I do.
4. Ten stations. They are RCTI, Trans TV, Indosiar, SCTV, ANTV, Metro TV, Lativi, Global TV, TV 7 and TVRI.
5. I like to watch comedy program.
6. Yes, I do, because it can give us entertainment.

The answer key for the oral comprehension questions:

1. People have different opinion about television.
2. No, they don't.
3.     - We can learn about other countries and other cultures from television.

- We can also learn about science, technology, arts, and politics.
- We can get a good entertainment from television.

4. a. We can be addicted to television and not doing our activities.
b. We can change our modest lifestyle because of the influence of commercials on television.
c. Our teenager's behavior can also be influenced by the criminal programs on television.
d. Our Indonesian culture can be changed, because we have become parts of the global village.
5. No, I don't. The writer states that the advantages of television are more than its disadvantages.

The answer key for the assessment:

1. C
2. A
3. D
4. C
5. C
6. A
7. A
8. B
9. B
10. C

## LESSON PLAN

(Experimental group, meeting one)

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Mass Media |
| Sub Theme | $:$ Television |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

## A. Competence

## 1. Basic Competence

Reading : Students are able to get some information from the reading text about television
2. Achievement Indicator

Students are able to:

- read the text with the correct pronunciation.
- answer the meaning of the vocabularies found in the text.
- answer comprehension questions about the text orally.
- answer the multiple choice questions related to the text.
B. Learning Materials
- Reading text "Is television a good or bad thing?" adapted from English for Communication for Junior High School Grade 3, page 68.
- Media: Vocabulary list, hand out
C. Teaching and Learning Activities

1. Approach:

- Communicative Approach
- Competency Based Approach


## 2. Techniques

- Question and answer
- Explanation
- Discussion

3. Class Activities:

## EXPERIMENTAL GROUP

## Pre-Reading Activities

1. Students are asked to mention all the words related to television that they know.
2. Students are asked to guess the meaning of the words used in the sentence example in English.

## Whilst-Reading Activities

3. Students are asked to listen to the teacher's reading the text.
4. Students are asked to read the text aloud paragraph by paragraph.
5. Students are asked to answer some comprehension questions related to the text orally.

## Post-Reading Activities

6. Students are asked to answer the multiple choice questions.
7. Students are asked to discuss the answer of the multiple choice questions.
8. Students are asked to listen to the teacher's reviewing the text.
D. Assessment
> Students are asked to answer the comprehension questions in the form of multiple choices.

## E. References/Resources:

Heasley, Brandon.2003.English for Communication. Jakarta. Erlangga.

## The Steps

| Procedures | Skills / Components | Teacher's Activities | Students' Activities | Time |
| :---: | :---: | :---: | :---: | :---: |
| Pre-Reading <br> Activities | Speaking <br> Listening | 1. Teacher greets the students and mentions the topic of the lesson that day. <br> 2. Teacher brainstorms the students' vocabulary mastery by asking them to mention the words related to the topic. <br> 3. Teacher distributes the student's worksheet. <br> 4. Teacher pronounces the words, reads the sentence example and asks the students to guess the meaning of the words used in the sentence example in English <br> 5. Teacher writes down the correct meanings on the whiteboard. | 1. Students respond to the teacher's greeting. <br> 2. Students mention all the words that they know related to the topic of the lesson. <br> 3. Students receive the worksheet. <br> 4. Students guess the meaning of the words used in the sentence example. <br> 5. Students copy the correct meaning. | 1 ' <br> $2^{\prime}$ <br> 1 ' <br> $8^{\prime}$ |

\begin{tabular}{|c|c|c|c|c|}
\hline \begin{tabular}{l}
Whilst- \\
Reading \\
Activities
\end{tabular} \& \begin{tabular}{l}
Listening \\
Reading \\
Reading \\
Speaking \\
Listening
\end{tabular} \& \begin{tabular}{l}
1. Teacher reads the text for the students. \\
2. Teacher asks some students to read aloud the text, paragraph by paragraph. \\
3. Teacher asks some comprehension questions about the text orally.
\end{tabular} \& \begin{tabular}{l}
1. Students listen carefully to the teacher. \\
2. Students read the text. \\
3. Students answer teacher's questions orally.
\end{tabular} \& 4
\(5^{\prime}\)

5 <br>

\hline Post-Reading Activities \& | Writing |
| :--- |
| Listening |
| Speaking | \& | 1. Teacher asks the students to do the assessment (answering reading comprehension questions in the form of multiple choice questions). |
| :--- |
| 2. Teacher discusses the answer with the students. |
| 3. Teacher gives comments on the students' work. |
| 4. Teacher closes the lesson by reviewing the reading text. | \& | 1. Students do the assessment. |
| :--- |
| 2. Students discuss the answer with the teacher. |
| 3. Students listen to the teacher's comment. |
| 4. Students listen to the teacher. | \& $10^{\prime}$ <br>

\hline
\end{tabular}

## Students' Worksheet

Vocabulary list

1. Educate:

- Teachers educate students.

2. Support:

- We come to support our team in the stadium.

3. Entertainment:

- Entertainment can make us happy.

4. Against:

- We must be against drugs, because they are dangerous for our body.

5. Exercise:

- Daily exercise makes us healthy.

6. Commercials:

- Factories use commercials to sell their products on TV, radio, or newspapers.

7. Advantage:

- Popular is the advantage of being a movie star.

8. Disadvantage:

- One of the disadvantages of smoking is getting lung cancer.


## READ THE TEXT CAREFULLY!

## Is television a good or bad thing?

People have different ideas about television. Some say that television will help educate our young people. Other people say that television is bad for young people.

The people who support television say that television is a great teacher. We can learn about other countries and other cultures from television. Television can teach us about science, technology, the arts and politics. We can learn anything from television. Moreover, television provides us a good entertainment that can make us relaxed from our tiring days.

The other people who are against television say that watching television is a drug (candu). It makes us not doing our other activities, or even having exercise. Television also has so many commercials that might change our modest lifestyle to be more consumptive. People mention that criminal programs on television sometimes influence our teenagers' behavior. They also say that television is changing our Indonesian culture. It is making us a part of the global village.

What is the truth? Is television good or bad? The truth is that television has changed our lives, but so have the motor car, the computer, the telephone, and many other things. The car transports us from place to place, but it also kills people (car crashes) and causes air pollution. Television also has advantages and disadvantages, but the advantages are more than the disadvantages.

## Assessment <br> CHOOSE THE CORRECT ANSWER!

1. What are the different ideas about television?
a. Television is educational
b. Television is dangerous
c. Television is both educational and dangerous
d . Television is entertaining and sometimes boring
2. Supporters say that using television we can learn:
a. science
c. the arts
b. technology
d. everything
3. People who are against television say:
a. television will make us ill
b. television is too expensive
c. television is changing our people
d. television is boring
4. What does "they" in the third paragraph refer to?
a. people who are against television
c. televisions
b. passive people
d. drugs
5. The word change in the fourth paragraph means:
a. move
c. opportunity
b. alter
d. destroy
6. The word transport in the fourth paragraph means:
a. move
c. opportunity
b. alter
d. destroy
7. Why is television a drug?
a. It contains dangerous materials.
b. It makes us drug users.
c. It makes us cannot stop watching it.
d. It is dangerous for our body.
8. The main idea of the last paragraph is:
a. Television is a good thing. c. Television changed our lives.
b. Television is like a car.
d. Television is a bad thing.
9. What is the effect of criminal program on teenagers?
a. They ignore it.
c. They believe it.
b. They imitate it.
d. They don't watch it.
10. Is television a good or bad? What does the writer think?
a. Television kills people.
b. Television has not changed the way we live.
c. Television is more good than bad.
d. Television causes air pollution.

## Teacher's Note

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Mass Media |
| Sub Theme | $:$ Television |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

## I. Learning Outcomes

1. The students are able to comprehend the information in the reading text.
2. The students are able to answer reading comprehension questions in the form of multiple choices.

## II. Pre-Instructional Activities

a. The teacher greets the students and mentions the topic of the lesson.

Teacher : Good morning, students!
Students : Good morning.
Teacher : How are you today?
Students : Fine, thanks.
Teacher : Today, we're going to learn about television.
b. The teacher asks the students to mentions some words related to the topic of the lesson.

Teacher: Today we are going to learn about people's opinion on television. Can you mention some words about television, words that related to television?
Students: Entertainment, channel, antenna, station, program ...
c. The teacher distributes the vocabulary list ad the worksheet.
d. The teacher mentions the words, reads the sentence example on the list and asks the students to guess the meaning of the words used in the sentence example in English.
e. Teacher writes down the correct meaning on the whiteboard.

## III. Whilst-Instructional Activities

a. The teacher reads the text for the student.
b. The teacher asks some student to read the text, paragraph by paragraph.
c. The teacher asks some comprehension questions related to the text orally.

1. What is the main idea of the text?
2. Does everybody agree that TV is good?
3. What are the good sides about TV?
4. Mention some bad sides about TV!
5. Do you think the writer agrees that TV is bad?

## IV. Post- Instructional Activities

a. The teacher asks the students to answer ten multiple choice questions related to the text.
b. The teacher discusses the answer of the questions with the students.
c. The teacher gives comments on the students' work.
b. The teacher closes the lesson by reviewing the reading text.

## Answer Key

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Mass Media |
| Sub Theme | $:$ Television |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

The possible answers for the vocabulary brainstorming:
Commercials, programs, movies, antenna, news, entertainment...

The answer key for the vocabulary list:

1. teach
2. give encouragement
3. amusement
4. physical activity to make someone's healthier
5. advertisement on radio or television
6. benefit
7. unfavorable condition

The answer key for the oral comprehension questions:

1. People have different opinion about television.
2. No, they don't.
3.     - We can learn about other countries and other cultures from television.

- We can also learn about science, technology, arts, and politics.
- We can get a good entertainment from television.

4. a. We can be addicted to television and not doing our activities.
b. We can change our modest lifestyle because of the influence of commercials on television.
c. Our teenager's behavior can also be influenced by the criminal programs on television.
d. Our Indonesian culture can be changed, because we have become parts of the global village.
5. No, I don't. The writer states that the advantages of television are more than its disadvantages.

The answer key for the assessment:

| 1. | C | 6. | A |
| :--- | :--- | :--- | :--- |
| 2. | D | 7. | C |
| 3. | C | 8. | A |
| 4. | A | 9. | B |
| 5. | B | 10. | C |

## APPENDIX M <br> LESSON PLAN FOR THE SECOND TREATMENT

## LESSON PLAN

(Control group, meeting two)

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Sports |
| Sub Theme | $:$ The Olympic Game |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

## A. Competence

1. Basic Competence

Reading : Students are able to get some information from the reading text about the Olympic Game.

## 2. Achievement Indicator

Students are able to:

- read the text with the correct pronunciation.
- answer the meaning of the vocabularies found in the text.
- answer comprehension questions about the text orally.
- answer the multiple choice questions related to the text.


## B. Learning Materials

- Reading text "The Olympic Game" adapted from Effective English for Junior High School Grade 3, page 36.
- Media: Hand out, picture


## C. Teaching and Learning Activities

1. Approach:

- Communicative Approach
- Competency Based Approach

2. Techniques

- Question and answer
- Explanation
- Discussion

3. Class Activities:

## CONTROL GROUP

Pre-Reading Activities

1. Students are asked to answer some triggering questions about the picture sticked on the whiteboard orally.

## Whilst-Reading Activities

2. Students are asked to listen to the teacher's reading the text.
3. Students are asked to read the text aloud paragraph by paragraph.
4. Students are asked to find difficult words in the text.
5. Students are asked to listen to the teacher's explaining the meaning of the difficult words.
6. Students are asked to answer some comprehension questions related to the text orally.

## Post-Reading Activities

7. Students are asked to answer the multiple choice questions.
8. Students are asked to discuss the answer of the multiple choice questions.
9. Students are asked to listen to the teacher's reviewing the text.
D. Assessment
$>$ Students are asked to answer the comprehension questions in the form of multiple choices.

## E. References/Resources:

H.S. Soegeng.2004.Effective English 3B. Solo. P.T. Tiga Serangkai Pustaka Mandiri.

The Steps

| Procedures | Skills / <br> Components | Teacher's Activities | Students' Activities | Time |
| :---: | :---: | :---: | :---: | :---: |
| Pre-Reading Activities | Speaking <br> Listening | 1. Teacher greets the students and mentions the topic of the lesson that day. <br> 2. Teacher asks the students to look at the picture sticked on the whiteboard. <br> 3. Teacher asks the students some triggering questions related to the topic of the reading text orally. <br> 4. Teacher gives comments on the students' answers. <br> 5. Teacher distributes the student's worksheet. | 1. Students respond to the teacher's greeting. <br> 2. Students look at the picture on the whiteboard. <br> 3. Students answer teacher's questions orally. <br> 4. Students listen to the teacher's comments. <br> 5. Students receive the worksheet. | 1 <br>  <br>  <br> 4 <br>  <br>  <br>  <br>  |


| Whilst- <br> Reading <br> Activities | Listening Reading <br> Reading <br> Speaking <br> Listening | 1. Teacher reads the text for the students. <br> 2. Teacher asks some students to read aloud the text, paragraph by paragraph. <br> 3. Teacher explains the difficult words that the students find in the text. <br> 4. Teacher asks some comprehension questions about the text orally. | 1. Students listen carefully to the teacher. <br> 2. Students read the text. <br> 3. Students ask the difficult words that they find in the text. <br> 4. Students answer teacher's questions orally. | 4' ${ }^{\prime}{ }^{\prime}$ |
| :---: | :---: | :---: | :---: | :---: |
| Post-Reading Activities | Writing Listening Speaking | 1. Teacher asks the students to do the assessment (answering reading comprehension questions in the form of multiple choice questions). <br> 2. Teacher discusses the answer with the students. <br> 3. Teacher gives comments on the students' work. <br> 4. Teacher closes the lesson by reviewing the reading text. | 1. Students do the assessment. <br> 2. Students discuss the answer with the teacher. <br> 3. Students listen to the teacher's comment. <br> 4. Students listen to the teacher. | 10' ${ }^{\prime}$ |

## Students’ Worksheet

## READ THE TEXT CAREFULLY!

## THE OLYMPIC GAMES

The Olympic Games are the biggest sport event in the world. Everybody will be proud if they have a chance to participate it. They began in Greece long time ago. They were held at Olympia. The Greek held the games every four years as a religious festival in honor of the supreme Greek God Zeus. Only men participated in the games. Women could not even watch them in the stadium.

At the first Olympic Games, there was only one event, which was running. Later, games had more events, such as, throwing the javelin, wrestling, boxing, and chariot racing. The only prize the winners got was a crown of leaves. It was a great honor to win, because it's not about the award but the achievement.

The games were still continued even after the Romans conquered Greece. But, the prize that was given was bigger. Therefore, people started to cheat and this made the Roman Emperor stopped the games.

In 1896, a Frenchman, Baron Pierre de Coubertin started the modern Olympic Games. He believed that the intemational sports competition would make goodwill and peace between nations and increase the international relationship. Like the ancient Olympic Games, the modern Olympic Games are held every four years. However, there are three main differences between the ancient and the modern Olympic Games. The first one is that the modern Olympic Games have more than twenty five events to compete and offer three kinds of medals: gold for the champion, silver for the runner up, and bronze for the third winner. The second difference is that there is a special opening ceremony for each new Olympic Games which is the lighting of the Olympic torch. And the last difference is that women may also join the games.

Assessment
CHOOSE THE CORRECT ANSWER!

1. Where were the first Olympic Games held?
a. Greece
c. Rome
b. French
d. Olympia
2. What does the word "chariot" in the second paragraph mean?
a. bicycle
c. horse
b. horse drawn vehicle
d. everything
3. Why did the Roman Emperor stop the Olympic Games?
a. Because he had to provide big prize.
b. Because Romans defeated Greece.
c. Because people cheated the games.
d. Because Romans joined Greece.
4. What does 'them' in the first paragraph refer to?
a. the games
c. Zeus
b. Greece
d. women
5. What did Baron think about the Olympic Games?
a. They could grow the nations' relationship.
b. They would force the nations to compete.
c. They were not necessary.
d. They belonged to Greek only.
6. What does the word "honor" in the first paragraph mean?
a. wage
c. please
b. payment
d. respect
7. What is the main idea of paragraph three?
a. the history of Roman
b. the prizes for the winners
c. the personality of the Roman Emperor
d. the stopping of the ancient Olympic Games.
8. What does the word "ancient" in the fourth paragraph mean?
a. latest
c. very special
b. newest
d. very old
9. What does the word "offer" in the fourth paragraph mean?
a. provide
c. win
b. consist of
d. sale
10. Which statement is true according to the text?
a. Everybody could join the first Olympic Games.
b. The modern Olympic Games have more events than the ancient Olympic Games.
c. The modern Olympic Games are exactly the same as the ancient Olympic Games.
d. The Roman Emperor revived the Olympic Games.

## Teacher's Note

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Sports |
| Sub Theme | $:$ The Olympic Games |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

## I. Learning Outcomes

1. The students are able to comprehend the information in the reading text.
2. The students are able to answer reading comprehension questions in the form of multiple choices.

## II. Pre-Instructional Activities

a. The teacher greets the students and mentions the topic of the lesson.

Teacher : Good morning, students!
Students : Good morning.
Teacher : How are you today?
Students : Fine, thanks.
Teacher : Today, we're going to learn about the Olympic Games.
b. The teacher asks the students to look at the picture sticked on the whiteboard.
c. The teacher asks the students some triggering questions related to the topic of the reading text.

1. Do you know what flag or symbol which is in the picture?
2. Where was the first Olympic Games held?
3. How often the Olympic is held?
4. Do you like to follow the Olympic Games news, from TV or newspaper maybe?
5. Does Indonesia also join the Olympic Games?

## III. Whilst-Instructional Activities

a. The teacher reads the text for the student.
b. The teacher asks some student to read the text, paragraph by paragraph.
c. The teacher asks the students to find the difficult words in the text.
d. The teacher explains the meaning of the difficult words found in the text.
e. The teacher asks some comprehension questions related to the text orally.

1. How many events were there at the first Olympic Games?
2. What was the prize for the winner in the Ancient Olympic Games?
3. What is the main idea of the third paragraph in the text?
4. Who started the modern Olympic Games?
5. How often does the Modern Olympic Games take place?
6. What were the prizes for the winner in the modern Olympic Games?

## IV. Post- Instructional Activities

a. The teacher asks the students to answer ten multiple choice questions related to the text.
b. The teacher discusses the answer of the questions with the students.
c. The teacher gives comments on the students' work.
b. The teacher closes the lesson by reviewing the reading text.

(Picture sticked on the whiteboard)

## TRIGGERING QUESTIONS:

1. Do you know what flag or symbol which is in the picture?
2. Where was the first Olympic Games held?
3. How often the Olympic is held?
4. Do you like to follow the Olympic Games news, from TV or newspaper maybe?
5. Does Indonesia also join the Olympic Games?

## Answer Key

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Sports |
| Sub Theme | $:$ The Olympic Games |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

The possible answers for the triggering questions:

1. It's the symbol of Olympic Games.
2. It was held in Greece.
3. Every four years.
4. Yes, I do.
5. Yes, it does.

The answer key for the oral comprehension questions:

1. There was only one event, which was running.
2. A crown of leaves.
3. It's about the stopping of the Olympic Games.
4. A Frenchman, named Baron Pierre de Coubertin.
5. The Olympic takes place every four years.
6. Gold, silver, and bronze medals.

The answer key for the assessment:

| 1. | D | 6. | D |
| :--- | :--- | :--- | :--- |
| 2. | B | 7. | D |
| 3. | C | 8. | D |
| 4. | A | 9. | A |
| 5. | A | 10. | B |

## LESSON PLAN

(Experimental group, meeting two)

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Sports |
| Sub Theme | $:$ The Olympic Games |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

## A. Competence

1. Basic Competence

Reading : Students are able to get some information from the reading text about the Olympic Games.
2. Achievement Indicator

Students are able to:

- read the text with the correct pronunciation.
- answer the meaning of the vocabularies found in the text.
- answer comprehension questions about the text orally.
- answer the multiple choice questions related to the text.


## B. Learning Materials

- Reading text "The Olympic Game" adapted from Effective English for Junior High School Grade 3, page 36.
- Media: Vocabulary list, hand out
C. Teaching and Learning Activities 1. Approach:
- Communicative Approach
- Competency Based Approach


## 2. Techniques

- Question and answer
- Explanation
- Discussion


## 3. Class Activities:

## EXPERIMENTAL GROUP

## Pre-Reading Activities

1. Students are asked to mention all the words related to the Olympic Games that they know.
2. Students are asked to guess the meaning of the words used in the sentence example in English.

## Whilst-Reading Activities

3. Students are asked to listen to the teacher's reading the text.
4. Students are asked to read the text aloud paragraph by paragraph.
5. Students are asked to answer some comprehension questions related to the text orally.

## Post-Reading Activities

6. Students are asked to answer the multiple choice questions.
7. Students are asked to discuss the answer of the multiple choice questions.
8. Students are asked to listen to the teacher's reviewing the text.
D. Assessment
$>$ Students are asked to answer the comprehension questions in the form of multiple choices.

## E. References/Resources:

H.S. Soegeng.2004. Effective English 3B. Solo. P.T. Tiga Serangkai Pustaka Mandiri.

## The Steps

| Procedures | Skills <br> Components | Teacher's Activities | Students' Activities | Time |
| :---: | :---: | :---: | :---: | :---: |
| Pre-Reading <br> Activities | Speaking <br> Listening | 1. Teacher greets the students and mentions the topic of the lesson that day. <br> 2. Teacher brainstorms the students' vocabulary mastery by asking them to mention the words related to the topic. <br> 3. Teacher distributes the student's worksheet. <br> 4. Teacher pronounces the words, reads the sentence example and asks the students to guess the meaning of the words used in the sentence example in English <br> 5. Teacher writes down the correct meanings on the whiteboard. | 1. Students respond to the teacher's greeting. <br> 2. Students mention all the words that they know related to the topic of the lesson. <br> 3. Students receive the worksheet. <br> 4. Students guess the meaning of the words used in the sentence example. <br> 5. Students copy the correct meaning. |  |


| Whilst- <br> Reading <br> Activities | Listening <br> Reading <br> Reading <br> Speaking <br> Listening | 1. Teacher reads the text for the students. <br> 2. Teacher asks some students to read aloud the text, paragraph by paragraph. <br> 3. Teacher asks some comprehension questions about the text orally. | 1. Students listen carefully to the teacher. <br> 2. Students read the text. <br> 3. Students answer teacher's questions orally. | 4 5 5 |
| :---: | :---: | :---: | :---: | :---: |
| Post-Reading Activities | Writing <br> Listening <br> Speaking | 1. Teacher asks the students to do the assessment (answering reading comprehension questions in the form of multiple choice questions). <br> 2. Teacher discusses the answer with the students. <br> 3. Teacher gives comments on the students' work. <br> 4. Teacher closes the lesson by reviewing the reading text. | 1. Students do the assessment. <br> 2. Students discuss the answer with the teacher. <br> 3. Students listen to the teacher's comment. <br> 4. Students listen to the teacher. | $10^{\prime}$ |

## Students' Worksheet

Vocabulary list

1. Honor (p.1):

- We have to honor the heroes.

2. Supreme (p.1):

- Undang Undang Dasar is the supreme law in our country.

3. Participate (p.1):

- Students participate in the school competition.

4. Honor (p.2):

- It is an honor to be invited to that great party.

5. Achievement (p.2):

- Teachers are very happy with the students' good achievements.

6. Conquer (p.3):

- We must conquer our fear.

7. Cheat (p.3):

- It is not right to cheat during the exams.

8. Increase (p.4):

- The government increased the gas price.

9. Ancient (p.4):

- This antique box is from the ancient time.

10. Compete (p.4):

- Each team had to compete hard in the last competition.

11. Offer (p.4):

- Indonesian Idol offers a car for its winner.

12. Torch (p.4):

- People in the old days used torch for their lightings.

READ THE TEXT CAREFULLY!

## THE OLYMPIC GAMES

The Olympic Games are the biggest sport event in the world. Everybody will be proud if they have a chance to participate it. They began in Greece long time ago. They were held at Olympia. The Greek held the games every four years as a religious festival in honor of the supreme Greek God Zeus. Only men participated in the games. Women could not even watch them in the stadium.

At the first Olympic Games, there was only one event, which was running. Later, games had more events, such as, throwing the javelin, wrestling, boxing, and chariot racing. The only prize the winners got was a crown of leaves. It was a great honor to win, because it's not about the award but the achievement.

The games were still continued even after the Romans conquered Greece. But, the prize that was given was bigger. Therefore, people started to cheat and this made the Roman Emperor stopped the games.

In 1896, a Frenchman, Baron Pierre de Coubertin started the modern Olympic Games. He believed that the international sports competition would make goodwill and peace between nations and increase the international relationship. Like the ancient Olympic Games, the modern Olympic Games are held every four years. However, there are three main differences between the ancient and the modern Olympic Games. The first one is that the modern Olympic Games have more than twenty five events to compete and offer three kinds of medals: gold for the champion, silver for the runner up, and bronze for the third winner. The second difference is that there is a special opening ceremony for each new Olympic Games which is the lighting of the Olympic torch. And the last difference is that women may also join the games.

Assessment
CHOOSE THE CORRECT ANSWER!

1. Where were the first Olympic Games held?
a. Greece
c. Rome
b. French
d. Olympia
2. What does the word "chariot" in the second paragraph mean?
a. bicycle
c. horse
b. horse drawn vehicle
d. everything
3. Why did the Roman Emperor stop the Olympic Games?
a. Because he had to provide big prize.
b. Because Romans defeated Greece.
c. Because people cheated the games.
d. Because Romans joined Greece.
4. What does 'them' in the first paragraph refer to?
a. the games
c. Zeus
b. Greece
d. women
5. What did Baron think about the Olympic Games?
a. They could grow the nations' relationship.
b. They would force the nations to compete.
c. They were not necessary.
d. They belonged to Greek only.
6. What does the word "honor" in the first paragraph mean?
a. wage
c. please
b. payment
d. respect
7. What is the main idea of paragraph three?
a. the history of Roman
b. the prizes for the winners
c. the personality of the Roman Emperor
d. the stopping of the ancient Olympic Games.
8. What does the word "ancient" in the fourth paragraph mean?
a. latest
c. very special
b. newest
d. very old
9. What does the word "offer" in the fourth paragraph mean?
a. provide
c. win
b. consist of
d. sale
10. Which statement is true according to the text?
a. Everybody could join the first Olympic Games.
b. The modern Olympic Games have more events than the ancient Olympic Games.
c. The modern Olympic Games are exactly the same as the ancient Olympic Games.
d. The Roman Emperor revived the Olympic Games.

## Teacher's Note

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Sports |
| Sub Theme | $:$ The Olympic Games |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

## I. Learning Outcomes

1. The students are able to comprehend the information in the reading text.
2. The students are able to answer reading comprehension questions in the form of multiple choices.

## II. Pre-Instructional Activities

a. The teacher greets the students and mentions the topic of the lesson. Teacher : Good morning, students!
Students : Good morning.
Teacher : How are you today?
Students : Fine, thanks.
Teacher : Today, we're going to learn about the Olympic Games.
b. The teacher asks the students to mentions some words related to the topic of the lesson.

Teacher: Today we are going to learr about the Olympic Games. Can you mention some words about the Olympic Games, words that related to the Olympic Games?

Students: Weight-lifting, sports, javelin throwing, Athena, prize...
c. The teacher distributes the vocabulary list and the worksheet.
d. The teacher mentions the words, reads the sentence example on the list and asks the students to guess the meaning of the words used in the sentence example in English.
e. Teacher writes down the correct meaning on the whiteboard.

## III. Whilst-Instructional Activities

a. The teacher reads the text for the student.
b. The teacher asks some student to read the text, paragraph by paragraph.
c. The teacher asks some comprehension questions related to the text orally.

1 How many events were there at the first Olympic Games?
2. What was the prize for the winner in the Ancient Olympic Games?
3. What is the main idea of the third paragraph in the text?
4. Who started the modern Olympic Games?
5. How often does the Modern Olympic Games take place?
6. What were the prizes for the winner in the modern Olympic Games?

## IV. Post- Instructional Activities

a. The teacher asks the students to answer ten multiple choice questions related to the text.
b. The teacher discusses the answer of the questions with the students.
c. The teacher gives comments on the students' work.
b. The teacher closes the lesson by reviewing the reading text.

## Answer Key

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Sports |
| Sub Theme | $:$ The Olympic Games |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

The possible answers for the vocabulary brainstorming:
Weight-lifting, sports, javelin throwing, Athena, prize...

The answer key for the vocabulary list:

1. public respect
2. greatest
3. take part
4. feeling of pride
5. reach by effort
6. defeat/overcome
7. act dishonestly
8. make greater in number
9. very old
10. take part in race
11. provide
12. piece of wood soaked in oil, used as light

The answer key for the oral comprehension questions:

1. There was only one event, which was running.
2. A crown of leaves.
3. It's about the stopping of the Olympic Games.
4. A Frenchman, named Baron Pierre de Coubertin.
5. The Olympic takes place every four years.
6. Gold, silver, and bronze medals.

The answer key for the assessment:

1. D
2. D
3. B
4. D
5. C
6. D
7. A
8. A
9. A
10. B

## APPENDIX N

LESSON PLAN FOR THE THIRD TREATMENT

## LESSON PLAN

(Control group, meeting three)

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Sports |
| Sub Theme | $:$ Football |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

## A. Competence

1. Basic Competence

Reading : Students are able to get some information from the reading text about football.
2. Achievement Indicator

Students are able to:

- read the text with the correct pronunciation.
- answer the meaning of the vocabularies found in the text.
- answer comprehension questions about the text orally.
- rearrange some letters into names of sports.
- answer the multiple choice questions related to the text.


## B. Learning Materials

- Reading text "Football" adapted from English on Sky for Junior High School Grade 3, page 101.
- Media: Hand out, picture


## C. Teaching and Learning Activities

1. Approach:

- Communicative Approach
- Competency Based Approach

2. Techniques

- Question and answer
- Explanation
- Discussion

3. Class Activities:

CONTROL GROUP

## Pre-Reading Activities

1. Students are asked to answer some triggering questions about the picture sticked on the whiteboard orally.

Whilst-Reading Activities
2. Students are asked to listen to the teacher's reading the text.
3. Students are asked to read the text aloud paragraph by paragraph.
4. Students are asked to find difficult words in the text.
5. Students are asked to listen to the teacher's explaining the meaning of the difficult words.
6. Students are asked to answer some comprehension questions related to the text orally.
7. Students are asked to rearrange the letters into names of sports.

## Post-Reading Activities

8. Students are asked to answer the multiple choice questions.
9. Students are asked to discuss the answer of the multiple choice questions.
10. Students are asked to listen to the teacher's reviewing the text.

## D. Assessment

$>$ Students are asked to answer the comprehension questions in the form of multiple choices.

## E. References/Resources: <br> Mukarto.2004.English on Sky. Jakarta. Erlangga.

## The Steps

| Procedures | Skills <br> Components | Teacher's Activities | Students' Activities | Time |
| :---: | :---: | :---: | :---: | :---: |
| Pre-Reading Activities | Speaking <br> Listening | 1. Teacher greets the students and mentions the topic of the lesson that day. <br> 2. Teacher asks the students to look at the picture sticked on the whiteboard. <br> 3. Teacher asks the students some triggering questions related to the topic of the reading text orally. <br> 4. Teacher gives comments on the students' answers. <br> 5. Teacher distributes the student's worksheet. | 1. Students respond to the teacher's greeting. <br> 2. Students look at the picture on the whiteboard. <br> 3. Students answer teacher's questions orally. <br> 4. Students listen to the teacher's comments. <br> 5. Students receive the worksheet. | $1{ }^{\prime}$ |


| Whilst- <br> Reading <br> Activities | Listening Reading <br> Reading <br> Speaking <br> Listening | 1. Teacher reads the text for the students. <br> 2. Teacher asks some students to read aloud the text, paragraph by paragraph. <br> 3. Teacher explains the difficult words that the students find in the text. <br> 4. Teacher asks some comprehension questions about the text orally. <br> 5. Teacher asks the students to rearrange the letters into names of sports. <br> 6. Teacher discusses the answers with the students. | 1. Students listen carefully to the teacher. <br> 2. Students read the text. <br> 3. Students ask the difficult words that they find in the text. <br> 4. Students answer teacher's questions orally. <br> 5. Students rearrange the letters into names of sports. <br> 6. Students discuss the answers with the teacher. |  |
| :---: | :---: | :---: | :---: | :---: |
| Post-Reading Activities | Writing <br> Listening <br> Speaking | 1. Teacher asks the students to do the assessment (answering reading comprehension questions in the form of multiple choice questions). <br> 2. Teacher discusses the answer with the students. | 1. Students do the assessment. <br> 2. Students discuss the answer with the teacher. | $10^{\prime}$ |


|  | 3. Teacher gives <br> comments on the <br> students' work. <br> 4. Teacher closes the <br> lesson by reviewing <br> the reading text. | 3. Students listen to <br> the teacher's <br> comment. <br> $4 . S t u d e n t s ~ l i s t e n ~ t o ~$ <br> the teacher. | 2, |
| :--- | :--- | :--- | :--- | :--- |
|  |  | 2 |  |

## Students' Worksheet

## READ THE TEXT CAREFULLY!

## FOOTBALL

You can find people playing football (soccer) everywhere, from streets to field, to giant football stadiums. It is the most popular sports in the world. People, especially male, young and old, love to play football or even just watch it on their TV.

Actually, there are several kinds of football, such as, American football and rugby, but soccer (association football) is the most popular. This game is quite different to American football and rugby. In football, a round leather ball is needed rather than an oval ball. Thus, the players are not allowed to handle the ball, they may only control it using their feet.

Football is a team game; which is played by two teams. Each team consists of eleven players. Football is played on a rectangular field. The field has a goal at each end of it. During the game, the players try to knock the ball through the opponents' goal.

There are four main positions in each football team. The first position is the goalkeeper. A goalkeeper is very important, because he has to guard the goal. The next position is the defender. While a goalkeeper takes care of the goal, a defender moves fro one end of the field to the other to defend and attack. There is also a midfielder who thwarts the opponent's attacks by winning control of the ball. And the last position is the attacker, who has the duty to score goal for the team.
(Adapted from English on Sky by Mukarto)

## KINDS OF SPORTS

Rearrange these letters into names of sports


## CHOOSE THE CORRECT ANSWER!

1. These are the reasons why football is the most popular sport in the world, EXCEPT:
a. It is easy to find people playing football.
b. People like to watch football match.
c. Football doesn't cost much money.
d. Men love playing football.
2. What does the word "leather" in the second paragraph mean?
a. heavy
c. material from animal skin
b. light
d. material from plastics
3. Which statement is correct about football??
a. It must be played in the stadium.
b. It used oval leather ball.
c. It is different from rugby.
d. It is only played in America.
4. What does 'it' in the first paragraph refer to?
a. people
c. football
b. sport
d. TV
5. What does the word "opponent" in the third paragraph mean?
a. referee
c. team
b. player
d. rival
6. What is the main idea of paragraph four?
a. the players position
c. the duty of a goalkeeper
b. the scoring of the game
d. the rule of the game
7. What does the word "watch" in the first paragraph mean?
a. look at
c. look after
b. look for
d. look like
8. What does the word "guard" in the fourth paragraph mean?
a. look at
c. look after
b. look for
d. look like
9. Which player usually scores the most goals in the match?
a. goalkeeper
c. defender
b. midfielder
d. attacker
10. What does 'it' in the third paragraph refer to?
a. the field
c. football
b. the goal
d. player

## Teacher's Note

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Sports |
| Sub Theme | $:$ Football |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

## I. Learning Outcomes

1. The students are able to comprehend the information in the reading text.
2. The students are able to answer reading comprehension questions in the form of multiple choices.

## II. Pre-Instructional Activities

a. The teacher greets the students and mentions the topic of the lesson.

Teacher : Good morning, students!
Students : Good morning.
Teacher : How are you today?
Students : Fine, thanks.
Teacher : Today, we're going to learn about football.
b. The teacher asks the students to look at the picture sticked on the whiteboard.
c. The teacher asks the students some triggering questions related to the topic of the reading text.

1. What are they doing in the picture?
2. Do you also like to play football?
3. How many kinds of football do you know? What are they?
4. How many persons are there in a football team?
5. Do you have a favorite football team? What is it?

## III. Whilst-Instructional Activities

a. The teacher reads the text for the student.
b. The teacher asks some student to read the text, paragraph by paragraph.
c. The teacher asks the students to find the difficult words in the text.
d. The teacher explains the meaning of the difficult words found in the text.
e. The teacher asks some comprehension questions related to the text orally.

1. What is the main idea of the first paragraph?
2. Mention kinds of football stated in the text!
3. How many teams played in a football game?
4. How many players are there in football team?
5. What kind of ball used in the game?
6. Which player has to guard the goal?
f. The teacher asks the students to rearrange the letters into names of sports.
g. The teacher discusses the answer with the students.

## IV. Post- Instructional Activities

a. The teacher asks the students to answer ten multiple choice questions related to the text.
b. The teacher discusses the answer of the questions with the students.
c. The teacher gives comments on the students' work.
b. The teacher closes the lesson by reviewing the reading text.

(Picture sticked on the whiteboard)

## TRIGGERING QUESTIONS:

1. What are they doing in the picture?
2. Do you also like to play football?
3. How many kinds of football do you know? What are they?
4. How many persons are there in a football team?
5. Do you have a favorite football team? What is it?

## Answer Key

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Sports |
| Sub Theme | $:$ Football |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

The possible answers for the triggering questions:

1. They are playing football.
2. Yes, I do.
3. Two kinds, American football and soccer.
4. Eleven persons.
5. Yes, I do, Juventus.

The answer key for the oral comprehension questions:

1. Football is a very popular sport.
2. American football, rugby, soccer.
3. Two.
4. Eleven players.
5. Round leather ball.
6. A goal keeper.

The answer key for rearranging the letters into names of sports:

1. Tennis
2. Cycling
3. Boxing
4. Swimming
5. Volleyball
6. Jogging
7. Badminton
8. Judo
9. Football
10. Gymnastics

The answer key for the assessment:

1. C
2. A
3. C
4. A
5. C
6. C
7. D

D
10. A

# LESSON PLAN <br> (Experimental group, meeting three) 

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Sports |
| Sub Theme | $:$ Football |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

## A. Competence

1. Basic Competence

Reading : Students are able to get some information from the reading text about football.
2. Achievement Indicator

Students are able to:

- read the text with the correct pronunciation.
- answer the meaning of the vocabularies found in the text.
- answer comprehension questions about the text orally.
- rearrange some letters into names of sports.
- answer the multiple choice questions related to the text.


## B. Learning Materials

- Reading text "Football" adapted from English on Sky for Junior High School Grade 3, page 101.
- Media: Vocabulary list, hand out


## C. Teaching and Learning Activities

1. Approach:

- Communicative Approach
- Competency Based Approach

2. Techniques

- Question and answer
- Explanation
- Discussion

3. Class Activities:

EXPERIMENTAL GROUP

## Pre-Reading Activities

1. Students are asked to mention all the words related to football that they know.
2. Students are asked to guess the meaning of the words used in the sentence example in English.

## Whilst-Reading Activities

3. Students are asked to listen to the teacher's reading the text.
4. Students are asked to read the text aloud paragraph by paragraph.
5. Students are asked to answer some comprehension questions related to the text orally.
6. Students are asked to rearrange the letters into names of sports.

## Post-Reading Activities

7. Students are asked to answer the multiple choice questions.
8. Students are asked to discuss the answer of the multiple choice questions.
9. Students are asked to listen to the teacher's reviewing the text.

## D. Assessment

$>$ Students are asked to answer the comprehension questions in the form of multiple choices.

## E. References/Resources: <br> Mukarto.2004.English on Sky. Jakarta. Erlangga.

## The Steps

| Procedures | Skills / <br> Components | Teacher's Activities | Students' Activities | Time |
| :---: | :---: | :---: | :---: | :---: |
| Pre-Reading <br> Activities | Speaking <br> Listening | 1. Teacher greets the students and mentions the topic of the lesson that day. <br> 2. Teacher brainstorms the students' vocabulary mastery by asking them to mention the words related to the topic. <br> 3. Teacher distributes the student's worksheet. <br> 4. Teacher pronounces the words, reads the sentence example and asks the students to guess the meaning of the words used in the sentence example in English <br> 5. Teacher writes down the correct meanings on the whiteboard. | 1. Students respond to the teacher's greeting. <br> 2. Students mention all the words that they know related to the topic of the lesson. <br> 3. Students receive the worksheet. <br> 4. Students guess the meaning of the words used in the sentence example. <br> 5. Students copy the correct meaning. | 2' ${ }^{\prime}$ |


|  | Listening <br> Reading <br> Reading <br> Speaking <br> Listening | 1. Teacher reads the text for the students. <br> 2. Teacher asks some students to read aloud the text, paragraph by paragraph. <br> 3. Teacher asks some comprehension questions about the text orally. <br> 4. Teacher asks the students to rearrange the letters into names of sports. <br> 5. Teacher discusses the answers with the students. | 1. Students listen carefully to the teacher. <br> 2. Students read the text. <br> 3. Students answer teacher's questions orally. <br> 4. Students rearrange the letters into names of sports. <br> 5. Students discuss the answers with the teacher. | 3, ${ }^{\prime}$, |
| :---: | :---: | :---: | :---: | :---: |
| Post-Reading Activities | Writing <br> Listening <br> Speaking | 1. Teacher asks the students to do the assessment (answering reading comprehension questions in the form of multiple choice questions). <br> 2. Teacher discusses the answer with the students. <br> 3. Teacher gives comments on the students' work. | 1. Students do the assessment. <br> 2. Students discuss the answer with the teacher. <br> 3. Students listen to the teacher's comment. | $10^{\prime}$ |


|  | 4. Teacher closes the <br> lesson by reviewing <br> the reading text. | 4. Students listen to <br> the teacher. | $2^{\prime}$ |
| :--- | :--- | :--- | :--- | :---: |

## Students' Worksheet

Vocabulary list

1. Actually (p.2):

- I like many sports, but actually my favorite sport is swimming.

2. Leather (p.2):

- People can make wallet and belt from leather.

3. Allowed (p.2):

- I'm not allowed to do high risk sports.

4. Opponent (p.3):

- Our opponent in the last match was from Jakarta Club.

5. Guard (p.4):

- The policemen are guarding the museum.

6. Thwart (p.4):

- We must thwart the enemy's attack by preparing an excellent plan.

7. Duty (p.4):

- It is our duty to fight for our country.


## READ THE TEXT CAREFULLY!

## FOOTBALL

You can find people playing football (soccer) everywhere, from streets to field, to giant football stadiums. It is the most popular sports in the world. People, especially male, young and old, love to play football or even just watch it on their TV.

Actually, there are several kinds of football, such as, American football and rugby, but soccer (association football) is the most popular. This game is quite different to American football and rugby. In football, a round leather ball is needed rather than an oval ball. Thus, the players are not allowed to handle the ball, they may only control it using their feet.

Football is a team game; which is played by two teams. Each team consists of eleven players. Football is played on a rectangular field. The field has a goal at each end of $i t$. During the game, the players try to knock the ball through the opponents' goal.
There are four main positions in each football team. The first position is the goalkeeper. A goalkeeper is very important, because he has to guard the goal. The next position is the defender. While a goalkeeper takes care of the goal, a defender moves fro one end of the field to the other to defend and attack. There is also a midfielder who thwarts the opponent's attacks by winning control of the ball. And the last position is the attacker, who has the duty to score goal for the team.

## KINDS OF SPORTS

Rearrange these letters into names of sports


## Assessment <br> CHOOSE THE CORRECT ANSWER!

1. Where were the first Olympic Games held?
a. Greece
c. Rome
b. French
d. Olympia
2. What does the word "chariot" in the second paragraph mean?
a. bicycle
c. horse
b. horse drawn vehicle
d. everything
3. Why did the Roman Emperor stop the Olympic Games?
a. Because he had to provide big prize.
b. Because Romans defeated Greece.
c. Because people cheated the games.
d. Because Romans joined Greece.
4. What does 'them' in the first paragraph refer to?
a. the games
c. Zeus
b. Greece
d. women
5. What did Baron think about the Olympic Games?
a. They could grow the nations' relationship.
b. They would force the nations to compete.
c. They were not necessary.
d. They belonged to Greek only.
6. What does the word "honor" in the first paragraph mean?
a. wage
c. please
b. payment
d. respect
7. What is the main idea of paragraph three?
a. the history of Roman
b. the prizes for the winners
c. the personality of the Roman Emperor
d. the stopping of the ancient Olympic Games.
8. What does the word "ancient" in the fourth paragraph mean?
a. latest
c. very special
b. newest
d. very old
9. What does the word "offer" in the fourth paragraph mean?
a. provide
c. win
b. consist of
d. sale
10. Which statement is true according to the text?
a. Everybody could join the first Olympic Games.
b. The modern Olympic Games have more events than the ancient Olympic Games.
c. The modern Olympic Games are exactly the same as the ancient Olympic Games.

## Teacher's Note

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Sports |
| Sub Theme | $:$ Football |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

## I. Learning Outcomes

1. The students are able to comprehend the information in the reading text.
2. The students are able to answer reading comprehension questions in the form of multiple choices.

## II. Pre-Instructional Activities

a. The teacher greets the students and mentions the topic of the lesson.

Teacher : Good morning, students!
Students : Good morning.
Teacher : How are you today?
Students : Fine, thanks.
Teacher : Today, we're going to learn about football.
b. The teacher asks the students to mentions some words related to the topic of the lesson.

Teacher: Today we are going to learn about football. Can you mention some words about football, words that related to football?

Students: Soccer, striker, goal, keeper...
c. The teacher distributes the vocabulary list and the worksheet.
d. The teacher mentions the words, reads the sentence example on the list and asks the students to guess the meaning of the words used in the sentence example in English.
e. Teacher writes down the correct meaning on the whiteboard.

## III. Whilst-Instructional Activities

a. The teacher reads the text for the student.
b. The teacher asks some student to read the text, paragraph by paragraph.
c. The teacher asks some comprehension questions related to the text orally.

1 What is the main idea of the first paragraph?
2. Mention kinds of football stated in the text!
3. How many teams played in a football game?
4. How many players are there in football team?
5. What kind of ball used in the game?
6. Which player has to guard the goal?
d. The teacher asks the students to rearrange the letters into names of sports.
e. The teacher discusses the answer with the students.

## IV. Post- Instructional Activities

a. The teacher asks the students to answer ten multiple choice questions related to the text.
b. The teacher discusses the answer of the questions with the students.
c. The teacher gives comments on the students' work.
b. The teacher closes the lesson by reviewing the reading text.

## Answer Key

| Subject | $:$ English |
| :--- | :--- |
| Theme | $:$ Sports |
| Sub Theme | $:$ Football |
| Skills | $:$ Reading |
| Class | $:$ Junior High School, Third Year |
| Semester | $: 2$ |
| Time Allocated | $: 1 \times 45$ minutes |

The possible answers for the vocabulary brainstorming:
Soccer, striker, goal, keeper...

The answer key for the vocabulary list:

1. in fact
2. material from animal skins
3. permitted
4. person who is against another in a game
5. protect
6. prevent from succeeding
7. something that one must do

The answer key for the oral comprehension questions:

1. Football is a very popular sport.
2. American football, rugby, soccer.
3. Two.
4. Eleven players.
5. Round leather ball.
6. A goal keeper.

The answer key for rearranging the letters into names of sports:

1. Tennis
2. Cycling
3. Boxing
4. Swimming
5. Volleyball
6. Jogging
7. Badminton
8. Judo
9. Football
10. Gymnastics

The answer key for the assessment:

1. C
2. A
3. C
4. A
5. C
6. C
7. C
8. D
9. D
10. A

## READING COMPREHENSION TEST

1. Do the test carefully!
2. Do not write anything on this paper!
3. Write down your answer on the answer sheet!
4. You have $\mathbf{4 5}$ minutes to do this test.

## READ THE TEXT CAREFULLY!

Passage one

## TELEVISION

Today, there is a TV set in nearly every home. People watch TV every day, and some people watch it from morning until night. Indonesians watch TV about 40 hours a week. But is TV good or bad for you? People have different opinions. Read what some people say.
a. People don't get any exercise. They just sit and watch TV.
b. It brings news from around the world.
c. People just want entertainment today. They don't want to think.
d. There's a lot of crime and violence on TV today. The programs are terrible.
e. Children learn many useful things from TV programs. It teaches them to read.
f. It helps me relaxed after a long day.
g. Programs on the radio are better. They make you think.
h. It's all commercial. I hate it!
i. People learn about life in other countries.
j. People don't read anymore. It's easier to watch TV.

Some of these statements are true, and some are not. And so, what do you think? Is TV good or bad?

## CHOOSE THE BEST ANSWER!

1. How many hours do Indonesians watch TV in a day?
a. about 6 hours
c. about 20 hours
b. about 12 hours
d. about 40 hours
2. The word "nearly" in the first paragraph means:
a. all
c. almost
b. about
d. few
3. According to the text, some people say that:
a. Criminal programs are useful.
b. TV can teach children to read.
c. TV programs are better than radlo programs.
d. There were few commercials on TV.
4. What does "they" in point a. refer to?
a. people
c. sitting and watching
b. exercises
d. televisions
5. The word "terrible" in point d. means:
a. awesome
c. wonderful
b. horrible
d. stunning
6. What do people like to watch on TV?
a. criminal programs
c. commercials
b. violent programs
d. news
7. These statements are true according to the first paragraph, EXCEPT:
a. TV is a familiar thing in home.
b. People rarely watch TV.
c. Indonesians watch TV about 40 hours a week.
d. People have different opinions about TV.
8. The word "commercial" in point h. means:
a. money
c. advertisement
b. program
d. movie
9. People can get these following things from TV, EXCEPT:
a. exercise
c. entertainment
b. news
d. information about life in other countries
10. The word "exercise" in point a. means:
a. assignment
c. study
b. money
d. physical activity

## Passage two

## The Olympic Games

One of the biggest sport events in the world is the Olympic Games. It began in Greece long time ago. It was held every four years at Olympia. Only men participated in the games. Women could not watch them in the stadium.

At the first Olympic Games, there was only one event, a running race. Later games had more events: long jump, javelin throwing, boxing, and chariot racing. The only prize the winner received was a crown of leaves. But it was a great honor to win.

When the Romans conquered Greece, they continued to hold the Olympic Games. But they started to give winners big prizes. Then people began to cheat, so the Roman Emperor, Theodosius stopped the games.

In 1896 a Frenchman, Baron Pierre de Coubertin, revived the Olympic Games. The games were held in Greece. They became the first modern Olympic Games. People from every country in the world can participate, and each time the games are held in a different country. At each new Olympic Games there is a special opening ceremony: the lighting of the Olympic torch. Runners carry the Olympic flame from Greece all the way to the host country for this purpose.

Like the ancient game, the modern games take place every four years. About 30 sports are contested. Today the winners receive medals as prizes instead of crowns of leaves.

Adapted from Communicative and Meaningful English SLTP 3, 2003

## CHOOSE THE BEST ANSWER!

11. Which statement is not true according to the text?
a. The first Olympic Games were held at Olympia.
b. Only men participated in the ancient Olympic Games.
c. Women could only watch the ancient Olympic Games from the stadiums.
d. The modern Olympic Games are held every four years.
12. The word "chariot" in the second paragraph means:
a. horse drawn vehicle
c. horse
b. bicycle
d. car
13. People began to cheat during the ancient Olympic Games because:
a. It was a great honor to win.
b. The Romans conquered Greece.
c. The Romans gave big prizes for the winners.
d. The Roman Emperor stopped the Games.
14. Where were the first modern Olympic Games held?
a. French
c. Rome
b. Greece
d. Olympia
15. The word "conquered" in the third paragraph means:
a. joined
c. took
b. lost
d. defeated
16. These events were held in the ancient Olympic Games, EXCEPT:
a. boxing
c. chariot racing
b. high jump
d. javelin throwing
17. The main idea of the third paragraph is:
a. the history of Roman
b. the prizes for the Olympic Games winners
c. the personality of Theodosius
d. the stopping of the ancient Olympic Games
18. What does "they" in the fourth paragraph refer to?
a. the games
c. Baron Pierre de Coubertin
b. Frenchmen
d. Greece
19. The word "flame" in the fourth paragraph means:
a. symbol
c. flag
b. fire
d. uniform
20. The word "ancient" in the fifth paragraph means:
a. latest
c. old
b. special
d. new

Passage three

## QUIDDITCH

Quidditch is a very popular wizard sport in Hogwardz School. It is played by two teams on an oval field. The field has three goals at each end of the field. Three balls: quaffle, bludger, and snitch are needed to play the game. Bludger is used to attack the opponent, quaffle is used to score goals, and snitch is the most important ball, since it can give the highest point for the team. Each team consists of 12 players.

During the game, the players try to chase the balls through the air on broomsticks. There are four main positions in each team: keeper, beater, chaser, and seeker. Keeper has the duty to guard the goal. While beater has to protect their team members from bludger attack by using a bat. To score goals is the responsible of a chaser. And the last, seeker is a player who seeks and catches the snitch.

## CHOOSE THE BEST ANSWER!

21. These statements are true, EXCEPT:
a. Quidditch is a famous sport in the world.
b. There are 24 players playing in a Quidditch game.
c. Each player must have a broomstick to play Quidditch
d. There are three balls used in Quidditch.
22. The word "wizard" in the first paragraph means:
a. teenager
c. pupil
b. athlete
d. magician
23. What does "it"in the first paragraph refer to?
a. snitch
C. point
b. ball
d. team
24. The main idea of the second paragraph is:
a. the description of Quidditch field
b. the balls used in Quidditch
c. the rules in playing Quidditch
d. the player positions in Quidditch
25. What should the players do to get the highest score?
a. avoid the bludger
c. catch the snitch
b. hit the quaffle
d. guard the goal
26. The word "guard" in the second paragraph means:
a. look at
c. look for
b. look after
d. look out
27. The word "seek" in the second paragraph means:
a. look at
c. look for
b. look after
d. look out
28. Who is responsible to score goals?
a. quaffle
c. snitch
b. chaser
d. seeker
29. What equipment is used by a beater?
a. bat
c. ball
b. field
d. goal
30. The word "chase" in the second paragraph means:
a. run
c. run after
b. run away
d. run out

## ANSWER SHEET

NAME :
CLASS / NO. :

| 1 | A | B | C | D |
| :---: | :---: | :---: | :---: | :---: |
| 2 | A | B | C | D |
| 3 | A | B | C | D |
| 4 | A | B | C | D |
| 5 | A | B | C | D |
| 6 | A | B | C | D |
| 7 | A | B | C | D |
| 8 | A | B | C | D |
| 9 | A | B | C | D |
| 10 | A | B | C | D |


| 11 | A | B | C | D |
| :---: | :---: | :---: | :---: | :---: |
| 12 | A | B | C | D |
| 13 | A | B | C | D |
| 14 | A | B | C | D |
| 15 | A | B | C | D |
| 16 | A | B | C | D |
| 17 | A | B | C | D |
| 18 | A | B | C | D |
| 19 | A | B | C | D |
| 20 | A | B | C | D |


| 21 | A | B | C | D |
| :---: | :---: | :---: | :---: | :---: |
| 22 | A | B | C | D |
| 23 | A | B | C | D |
| 24 | A | B | C | D |
| 25 | A | B | C | D |
| 26 | A | B | C | D |
| 27 | A | B | C | D |
| 28 | A | B | C | D |
| 29 | A | B | C | D |
| 30 | A | B | C | D |$|$

## ANSWER KEY OF THE READING COMPREHENSION TEST

| 1. | A | 11. | C | 21. | A |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2. | C | 12. | A | 22. | D |
| 3. | B | 13. | C | 23. | A |
| 4. | A | 14. | D | 24. | D |
| 5. | B | 15. | D | 25. | C |
| 6. | D | 16. | B | 26. | B |
| 7. | B | 17. | D | 27. | C |
| 8. | C | 18. | A | 28. | B |
| 9. | A | 19. | B | 29. | A |
| 10. | D | 20. | C | 30. | C |



