**Report of CROSSWORD PUZZLE**

This is an **innovative method of Teaching and Learning** freshly introduced for TY BSc Physics students of 2015-2016 batch. Puzzles were designed in such a way that it held the students’ attention on the subject. The subject was 8085 microprocessor of Electronic Instrumentation. Two puzzles were solved with Menu for 'Across' and 'Down' given on 8th February 2016. Students got completely engrossed into the subject. This helped them in better understanding of the subject. The students too enjoyed solving the puzzle.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**CROSSWORD PUZZLE –1**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** |  |  | **3** |  |  |  |  |  |
|  |  |  |  | **4** |  | **5** |  |  |  |
|  |  |  |  |  |  | **6** |  |  |  |
|  | **7** | **8** |  |  |  |  |  |  |  |
|  |  |  |  | **9** |  | **10** |  | **11** |  |
|  | **12** |  |  |  |  |  |  |  |  |
| **13** |  |  |  |  |  | **14** |  |  |  |
|  |  |  |  |  |  |  |  |  | **15** |
| **16** |  | **17** |  | **18** |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Puzzle1 MENU |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | **Across** |  | **Down** |  |  |  |
| 1 | Copy accumulator content to any register R(5) | 2 | Logically OR accumulator with C register(4) | | | |
| 4 | Decimal adjust addition(3) | 3 | Add immediate 8 bit data with accumulator(3) | | | |
| 6 | Add HL pair with itself(4) | 5 | Add with carry L register(4) | |  |  |
| 7 | Complement accumulator(3) | 8 | Move immediately to accumulator 8 bit data(4) | | | |
| 10 | Load HL pair direct(4) | 9 | Rotate accumulator right(3) | |  |  |
| 12 | Disable interrupt(2) | 11 | Load data to accumulator from memory(3) | | | |
| 14 | Copy accumulator content to memory location(3) | 13 | Jump if no carry(3) | |  |  |
| 16 | Compare immediately with 8 bit data(3) | 14 | Store from HL pair direct(4) | |  |  |
| 18 | Rotate accumulator left with carry(3) | 15 | Unconditional jump(3) | |  |  |
|  |  | 17 | Accept data from output port to accumulator(2) | | | |

**CROSSWORD PUZZLE –2**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** |  |  |  |  |  |  |  |  |  |
| **2** | **3** |  |  | **4** | **5** |  | **6** |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **7** |  |  |  |  |  |  | **8** |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  | **9** |  |  |  | **10** |  |  |  |
|  |  |  |  | **11** |  |  |  | **12** |  |
|  |  | **13** |  |  |  |  |  |  |  |
| **14** |  |  |  |  | **15** | **16** |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **17** |  |  |  | **18** |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Puzzle2 MENU |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | **Across** |  | **Down** |  |  |  |
| 2 | Rotate accumulator right with carry(3) | 1 | Clear accumulator using logical operator(4) | | | |
| 4 | Copy data from A to L register(5) | 3 | Ass A to B(4) | | | |
| 7 | Add with carry B register to A register(4) | 5 | Copy data from accumulator to output port(3) | |  |  |
| 8 | Logically AND immediate data with accumulator(3) | 6 | Same as Across 14(3) | | | |
| 11 | Subtract immediate(3) | 9 | Complement carry flag(3) | |  |  |
| 13 | Compare any register content with accumulator(3) | 10 | Enable interrupt(2) | | | |
| 14 | Load data from memory to accumulator(3) | 11 | Set carry flag(in reverse order upwards)(3) | |  |  |
| 15 | Move from H register to A(5) | 12 | Store from accumulator to memory directly(3) | |  |  |
| 17 | Copy data from output port to accumulator(2) | 14 | Set HL pair as pointer(4) | |  |  |
| 18 | Store data from accumulator to address in any pair of registers(4) | 16 | Logically OR A with itself(4) | | | |