# Sample Question Paper for ICIT Common Entrance Test

## Basics of analog-digital electronic(10marks)

| 1 | How many flip-flops are required to build a binary counter to count from 0 to 1023 | a) | 6 |
|---|---|---|---|
|   |   | b) | 8 |
|   |   | c) | 10 |
|   |   | d) | 24 |
| 2 | The digital logic family which has minimum power dissipation is | a) | TTL |
|   |   | b) | RTL |
|   |   | c) | DTL |
|   |   | d) | CMOS |
| 3 | A ring counter consisting of five flip-flops will have | a) | 5 states |
|   |   | b) | 10 states |
|   |   | c) | 32 states |
|   |   | d) | Infinite states |
| 4 | The hexadecimal equivalent of decimal number 95.5 is | a) | 5F.8 |
|   |   | b) | 9A.B |
|   |   | c) | 2E.F |
|   |   | d) | 5A.4 |
| 5 | A device which converts BCD to Seven Segment is called | a) | Encoder |
|   |   | b) | Decoder |
|   |   | c) | Multiplexer |
|   |   | d) | Demultiplexer |

## Microprocessor(20marks)

| 6 | Non-maskable interrupt is | a) | Interrupt whose address is known to the processor |
|---|---|---|---|
|   |   | b) | interrupt whose address is not known to the processor and processor gets it from nterrupting source |
|   |   | c) | Interrupt that cannot be disabled by the programmer |
|   |   | d) | Interrupt that can be disabled by the programmer |
| 7 | A processor is 16-bit implies | a) | The address bus is 16 bit |

| | | | |
|---|---|---|---|
| | | b) | The data bus is 16 bit |
| | | c) | ALU can process 16-bit data simultaneously |
| | | d) | None of above |
| 8 | Interrupt is a signal that can be given to microprocessor by | a) | Hardware |
| | | b) | Software |
| | | c) | Program generated exception |
| | | d) | All of the above |
| 9 | Vectored interrupt is | a) | Interrupt whose address is known to the processor |
| | | b) | Interrupt that cannot be disabled by the programmer |
| | | c) | Interrupt that can be disabled by the programmer |
| | | d) | Interrupt with highest priority |
| 10 | 16-bit register/ registers in 8085 | a) | Stack pointer |
| | | b) | Program Counter |
| | | c) | IR |
| | | d) | Both a & b |

**C-Basics(40 marks)**

| | | | |
|---|---|---|---|
| 11 | Which of following about C comments is incorrect ? | a) | Comments can go over multiple lines |
| | | b) | Comments can start any where in the line |
| | | c) | Comments can occur within a comment |
| | | d) | A line can contain comments with out any language statements |
| 12 | Which of following is/are true regardless of implementation? | a) | Only i |
| | i. sizeof (long) is less than sizeof (int) | b) | Only i & iii |
| | ii. sizeof (int) equals sizeof (unsigned) | c) | Only ii |
| | iii. sizeof (double) is less than sizeof (float) | d) | only iii |
| 13 | Which of the following is not primary data type | a) | char |
| | | b) | int |
| | | c) | double |
| | | d) | structure |
| 14 | Which data type is most suitable for storing a number 65000 in a 32-bit compiler? | a) | short |
| | | b) | int |
| | | c) | long |

| | | | d) | char |
|---|---|---|---|---|
| 15 | The range of character on Turbo-C compiler is | a) | 0 to 255 | |
| | | b) | -128 to +127 | |
| | | c) | -127 to +128 | |
| | | d) | -255 to + 255 | |
| | **Communication(10marks)** | | | |
| 16 | An FM radio receiver is tuned to 90.6 MHz broadcast station. It will receive an image frequency of | a) | 110 MHz | |
| | | b) | 112 MHz | |
| | | c) | 114 MHz | |
| | | d) | 120 MHz | |
| 17 | A FM signal is being broadcas in the 88.108 MHz band having carrier swing of 125 kHz. The modulation index is | a) | 100% | |
| | | b) | 83% | |
| | | c) | 67% | |
| | | d) | 50% | |
| 18 | Pre-emphasis in FM systems involves | a) | Compression of modulating signal | |
| | | b) | exapnsion of the modulating signal | |
| | | c) | amplification of lower frequency components of modulating signal | |
| | | d) | amplification of higher frequency components of modulating signal | |
| 19 | In pahse modulation frequency deviation is | a) | Independent of the modulating signal frequency | |
| | | b) | inversely proportional to the modulating signal frequency | |
| | | c) | directly proportional to the modulating signal frequency | |
| | | d) | inversely proportional to square root of the modulating frequency | |
| 20 | Which type of modulation is used for vividh Bharati Pune? | a) | AM | |
| | | b) | FM | |
| | | c) | QAM | |
| | | d) | None of the above | |
| | **Apptitude(10marks)** | | | |
| 21 | Which of the following is not a leap year? | a) | 700 | |
| | | b) | 800 | |
| | | c) | 1200 | |
| | | d) | 2000 | |
| 22 | Today is Monday. After 61 days, it will be: | a) | Wednesday | |
| | | b) | Saturday | |

| | | | |
|---|---|---|---|
| | | c) | Tuesday |
| | | d) | Thursday |
| 23 | A can run 22.5 m while B runs 25 m. In one kilometre race B beats A by: | a) | 102 m |
| | | b) | 100 m |
| | | c) | 75 m |
| | | d) | 112.5 m |
| 24 | A sum of Rs. 12,500 amounts to Rs. 15,500 in 4 years at the rate of simple interest. What is the rate of interest? | a) | 3% |
| | | b) | 4% |
| | | c) | 5% |
| | | d) | 6% |
| 25 | The simple interest at x% for x years will be Rs. x on sum of | a) | Rs. x |
| | | b) | Rs. (100/x) |
| | | c) | Rs. 100x |
| | | d) | Rs. (100/x*x) |
| | **Numerical ability(10marks)** | | |
| 26 | Find the least value of * for which 7*5462 is divisible by 9 | a) | 3 |
| | | b) | 12 |
| | | c) | 2 |
| | | d) | None of above |
| 27 | If the number 5 * 2 is divisible by 6, then * = ? | a) | 2 |
| | | b) | 7 |
| | | c) | 3 |
| | | d) | 6 |
| 28 | What fraction of an hour is a second | a) | 1/24 |
| | | b) | 1/60 |
| | | c) | 1/120 |
| | | d) | 1/3600 |
| 29 | If a - b = 6 and $a^2 + b^2 = 116$, then what is the value of ab? | a) | 20 |
| | | b) | 40 |
| | | c) | 60 |
| | | d) | 80 |
| 30 | If x% of a is same as y% of b then z% of b is | a) | xy/z % of a |
| | | b) | yz/x % of a |
| | | c) | xz/y % of a |
| | | d) | None of above |

**Answer Key**

| 1 | C | 2 | D | 3 | A | 4 | A | 5 | B | 6 | C |
|---|---|----|---|----|---|----|---|----|---|----|---|
| 11 | C | 12 | C | 13 | D | 14 | A | 15 | B | 16 | B |
| 21 | A | 22 | B | 23 | B | 24 | D | 25 | B | 26 | A |

| 7 | C | 8 | D | 9 | A | 10 | D |
|----|---|----|---|----|---|----|---|
| 17 | B | 18 | D | 19 | C | 20 | B |
| 27 | A | 28 | D | 29 | B | 30 | C |