

DIGITAL LOGIC QUIZ 1 SET 2

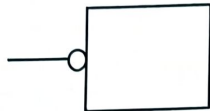
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Section:	2

Answers:

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

1. What is the meaning of the symbol? (1m)



- A. on-state
- B. pulse state
- C. active high ~~x~~
- D. active low ~~x~~

2. Which of the following is used to measure the rate of information transmitted in a digital signal? (1m)

- A. Amplitude
- B. Duty Cycle
- C. Phase
- D. Bandwidth

3. Which of the following is a fixed-function integrated circuit used in digital electronics? (1m)

- A. FPGA
- B. CPLD
- C. PLD
- D. AND gate

4. _____ is used to route data from one source to multiple destinations? (1m)

- A. Encoder
- B. Decoder
- C. MUX
- D. DEMUX

5. Which numbering system uses the digits 0 to 7? (1m)

- A. Binary
- B. Decimal
- C. Hexadecimal
- ☒ D. Octal

6. Assuming a 25% duty cycle and a 40 Hz frequency, find the period time (T) and the system's pulse width (tw) in seconds (s). (2m)

- A. T = 0.00625 s, tw = 0.025 s
- B. T = 0.625 s, tw = 0.025 s
- C. T = 0.0625 s, tw = 0.25 s
- ☒ D. T = 0.025 s, tw = 0.00625

$$T = \frac{1}{40} = 0.025 \text{ s}$$

$$\frac{tw}{0.025} \times 100 = 25$$

$$tw = 0.00625$$

7. Which of the following represents the binary number 101100.0111 in octal? (2m)

- A. 35.24
- ☒ B. 54.34
- C. 45.43
- D. 65.53

5 4 . 3 4

8. What is the BCD equivalent of the decimal number 12.45? (2m)

- ☒ A. 00010010.01000101
- B. 00010001.01101001
- C. 11000010.10010011
- D. 10010001.01100001

001010.000101

00010010.01000101

9. What is the decimal equivalent of the binary number 10111.0011? (2m)

- ☒ A. 23.1875
- B. 11.0875
- C. 16.5255
- D. 26.1255

$$16 + 4 + 2 + 1 + 0.125 + 0.0625 = 23.1875$$

10. Using the ASCII Table (Table 2), fill Table 1 with the correct characters and values. (2m)

Table 1

Character	ASCII Hexa	Binary (7 bit)	ODD Parity (8 bit)	New ASCII Hexa
4	(i)	1000111 (4)	(ii)	(iii)

- A. (i) 47, (ii) 1 1000111, (iii) C7
- ☒ B. (i) 75, (ii) 1 1000111, (iii) D7
- C. (i) 46, (ii) 1 1001011, (iii) C5
- D. (i) 64, (ii) 1 1100111, (iii) A4

10 11 12
A B C