

BSS (MCQ Test) / Fill in the blanks.)

1. If a signal depends on only one independent variable, it is called a _____ signal.

2. Discrete-time signals are _____ in time and _____ in amplitude.

3. $u(t-a) = 0$ if

(a) $t-a=0$ (b) $t-a < 0$ (c) $t-a > 0$ (d) $t > a$

4. $t \delta(t) =$

(a) t (b) 0 (c) 1 (d) $u(t)$

5. $\int_{-\infty}^{\infty} (t-2)^2 \delta(t-2) dt =$

(a) 4 (b) 2 (c) $(t-2)$ (d) 0

6. $\int_{-\infty}^{\infty} x(t) \delta(t) dt =$

(a) $x(t_0)$ (b) $x(t)$ (c) $\delta(t)$ (d) $x(0)$

(7) $\delta(at) =$

(a) $\delta(t)$

(b) $|a|\delta(t)$

(c) $1/|a|\delta(t)$

(d) none of above.

(8) Unit ramp function can be obtained by _____ the unit step function.

(9) The signals that are discrete in time and quantized in amplitude are called _____.

(10) The representation of a signal by mathematical expression is known as _____.

(11) The value of integral $\int_{-\infty}^{\infty} \delta(at - b) dt =$

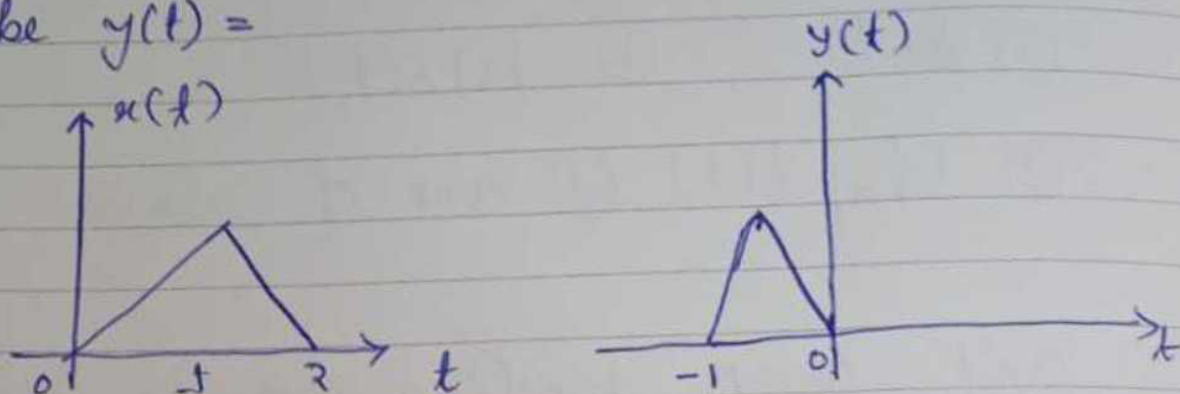
(a) $1/a^2$

(b) $1/|a|$

(c) $1/a$

(d) $-1/a$

(12) Consider the following signals $x(t)$ & $y(t)$.
The relation between $x(t)$ and $y(t)$ can be $y(t) =$



- (a) $x(t+1)$ (b) $x(2t+2)$ (c) $x(t-1)$
(d) $x(2t-1)$.

(13) The value of integral

$$\int_{-\infty}^{\infty} (t^3 + 4) \delta(1-t) dt$$
is _____.

(14) The value of The summation

$$\sum_{n=0}^5 \delta(n+1) 2^n$$

is _____.

26 27 28
(15) we can sketch the signal,

$$u(-n+2) \cdot u(n) \text{ as } \underline{\hspace{2cm}}.$$