

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : B.E/ECE	Year / Semester : II/03	Format No.	NAC/TLP-07a.13
Subject Code : EC8392	Subject Name : DIGITAL ELECTRONICS	Rev. No.	02
Unit No : 4	Unit Name : ASYNCHRONOUS SEQUENTIAL CIRCUITS	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
01	Asynchronous sequential circuits do not use clock pulses. a) True b) False	L2
02	The change of internal state occurs when there is a change in the input variables. a) True b) False	L2
03	The memory elements in asynchronous sequential circuits are either unclocked flip-flops or time delay elements. a) True b) False	L2
04	An asynchronous sequential circuit quite often resembles a _____ a) Combinational circuit without feedback b) Combinational circuit with feedback c) Both a and b d) None of the mentioned	L2
05	The design of asynchronous sequential circuits is more difficult than that of synchronous circuits because of the timing problems involved in the feedback path. a) True b) False	L1
06	In a properly designed synchronous system, timing problems are eliminated by triggering all flip flops with the pulse edge. a) True b) False	L1
07	Asynchronous sequential circuits are used when speed of operation is not important. a) True b) False	L1
08	Asynchronous circuits are useful in applications where the input signals to the system may change at any time, independently of an internal clock. a) True b) False	L2
09	Block diagram of asynchronous sequential circuit consists of a Combinational circuit and delay elements connected to form feedback loops. a) True b) False	

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10	<p>The delay elements can be visualized as providing short- term memory for the sequential circuit.</p> <p>a) True b) False</p>	L3
11	<p>The present-state and next state variables in asynchronous sequential circuits are customarily called secondary variables and excitation variables respectively.</p> <p>a) True b) False</p>	L2
12	<p>For a given value of input variables, the system is stable if the circuit reaches a steady-state condition with $y_i = Y_i$ for $i=1,2,\dots,k$.</p> <p>a) True b) False</p>	L1
13	<p>Fundamental-mode operation assumes that the input signals change one at a time and only when the circuit is in a stable condition.</p> <p>a) True b) False</p>	L2
14	<p>Naming the States by letter symbols without making specific reference to their binary values. Such a table is called a flow table.</p> <p>a) True b) False</p>	L1
15	<p>The table with only one stable state in each row is called a primitive flow table.</p> <p>a) True b) False</p>	L2
16	<p>A race condition is said to exist in an asynchronous sequential circuit when two or more binary state variables change value in response to a change in an input variable.</p> <p>a) True b) False</p>	L1
17	<p>If the final stable state that the circuit reaches does not depend on the order in which the state variables change, the race is called a critical race.</p> <p>a) True b) False</p>	
18	<p>Races may be avoided by by making a proper binary assignment to the state variables.</p> <p>a) True b) False</p>	