<Program Code: CO/CM/CW/DE/EJ/ET/EN/EX/EQ/IE/IS/IC/MU> : <Course Code: 22320> : <Course Name: Digital Techniques>:

<Topic Name: Combinational Logic Circuits>:

<UO3d.2: To construct demultiplexer of given specification using logic gates and digital ICs**>**

<Assessments>: <Formative>

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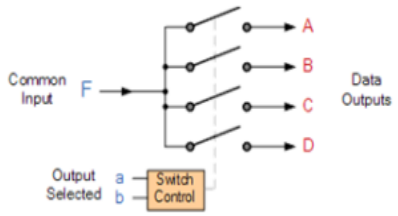
Assessment Type: Formative Assessments: Embedded questions in PPT

Set 1: Question No 1	**Set 1: Question No 2**	**Set 1: Question No 3**
In 1:4 demultiplexer the number of select lines required is_____	The word demultiplex means _____	The number of AND gates required in logic diagram of 1:8 demultiplexer
Recall/ Remembering	**Understanding**	**Application**
a) 2	a) One into many	a) 2
b) 3	b)Many into one	b) 6
c) 4	c) Distributor	c) 8
d) 5	d)One into many as well as Distributor	d) 5
Ans: a) 2	**Ans: d) One into many as well as Distributor**	**Ans: c) 8**

Set 2: Question No 1	**Set 2: Question No 2**	**Set 2: Question No 3**
Identify the type of given DEMUX 	DEMUX can be used as _____	Identify the DEMUX type for the given truth table.
Recall/ Remembering	**Understanding**	**Application**
a) 1:8	a) Decoder	a) 1:8
b) 1:4	b) Encoder	b) 1:4
c) 1:2	c) Multiplexer	c) 1:2
d) 4:1	d) None of the above	d) 8:1
Ans: b) 1:4	**Ans: a) Decoder**	**Ans: a) 1:8**

INPUT			OUTPUT							
S_2	S_1	S_0	d7	d6	d5	d4	d3	d2	d1	d0
0	0	0	0	0	0	0	0	0	0	1
0	0	1	0	0	0	0	0	0	1	0
0	1	0	0	0	0	0	0	1	0	0
0	1	1	0	0	0	0	1	0	0	0
1	0	0	0	0	0	1	0	0	0	0
1	0	1	0	0	1	0	0	0	0	0
1	1	0	0	1	0	0	0	0	0	0
1	1	1	1	0	0	0	0	0	0	0

Assessment Type: Practice Worksheets: End of UO3d.2: in LMS

If students have access to laptop/ desktop – they can answer it on LMS, else download it and answer it and file it for later use. They can also copy the question in their notebook in case the space provided is insufficient.

A. Draw 1:16 DEMUX tree using 1:4 DEMUX.	**B.** Define demultiplexer. State the need of demultiplexer. List its any two applications,
A. Answer Space	**B. Answer Space**
C. Draw Block diagram of 1:4demultiplexer and write its truth table.	**D.** Draw Block diagram of 1:16 demultiplexer and write its truth table.
C. Answer Space	**D. Answer Space**

E. Identify function of following IC 74155and draw its Pin diagram	F. Draw the logic diagram of 1:8 DEMUX and write its Truth table
E. Answer Space	**F. Answer Space**
G. Draw 1:16 DEMUX Tree using two 1:8 MUX and one 1:2 DEMUX.	H. Describe the operating principle of DEMUX as decoder
G. Answer Space	**H. Answer Space**