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B TECH
(SEM VIII) THEORY EXAMINATION 2017-18
ADVANCED DISPLAY TECHNOLOGIES & SYSTEMS

Time: 3 Hours *Total Marks: 100*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 10 = 20

a) Explain optical Modulation.
b) Explain the properties of Light.
c) What are Display glasses?
d) What do you understand by graphic controllers?
e) Explain Properties of Liquid Crystals.
f) What is an OLED?
g) Explain the basic principle of CRT.
h) Describe holographic display.
i) Describe the advantages of DLP projections.
j) Explain MEMS Microdisplays.

SECTION B

2. Attempt any *three* of the following: 10 x 3 = 30

a) Explain Binocular Vision and Depth Perception. Differentiate between Passive Matrix & Active Matrix Driving.
b) Discuss the various attributes of Flexible Displays. Explain the technologies compatible with flexible Substrate. Mention some applications of Flexible Displays.
c) Explain the difference between Organic Electroluminescent Displays & Inorganic Electroluminescent Displays. Explain the Thin Film Electroluminescent Display.
d) Explain the construction and functioning of Trans-reflective Displays for Mobile Devices. Describe the Energy Aspects of Mobile Display Technology.
e) Differentiate between Standard Measurement Procedures & Advanced Measurement Procedures used in Cognitive Engineering and Information Displays. Briefly define the terms: Spatial Effects, Temporal Effects.

SECTION C

3. Attempt any *one* part of the following: 10 x 1 = 10

(a) Describe the Anatomy of Eye. Explain the terms Vision and Perception.

(b) Explain the Power Supply Sequencing in detail. Also describe Driving Displays.

4. Attempt any *one* part of the following: 10 x 1 = 10

(a) Describe the components Touch Screen Technologies. Explain its Interfaces with Computer Mechanism.

(b) Give the overview of Semiconductor TFT Technology. Also Describe the Photolithography Patterning Processes for Thin Film LCD.

5. Attempt any *one* part of the following: 10 x 1 = 10

(a) Explain & differentiate between Plasma Display Panels & LED Display Panels.

(b) Explain the features of LCD Device Technology. Differentiate between Twisted Numeric and Super twisted Numeric Displays.

6. Attempt any *one* part of the following: 10 x 1 = 10

(a) Explain the different types of Low Power 3-D Displays. Differentiate between 3-D Cinema Technology & Autostereoscopic 3-D Technology.

(b) Differentiate between Volumetric and 3-D Volumetric Display Technologies and describe the advantages and applications.

7. Attempt any *one* part of the following: 10 x 1 = 10

(a) Explain the term Green Technologies in Display Engineering. Also discuss Display Technology Dependent Issues.

(b) Describe the various types of Microdisplay Technologies. Describe the applications of Microdisplay Technologies.