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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.