

Federal University of Technology, Minna
School of Science and Technology Education
Department of Industrial and Technology Education
SECOND SEMESTER EXAMINATION
2017/2018 SESSION

Course Title: - Material Technology II

Course Code: - ITE 323

INSTRUCTION: - ANSWER ANY FOUR (4) QUESTIONS ONLY

TIME ALLOWED: - 2HRS

- 1a. Define the term Material Technology?
- b. Write short note on the following materials?
- Metals - Ceramics - Plastics - Semiconductor - Composites - Polymers
- c. State three classes of Polymers?
- d. What are Biomaterials?
- 2a. How can corrosion resistance of metals be achieved?
- b. Enumerate the use of the following materials?
- Nylon - Melamine - Acrylic - P.V.C
- c. What are Ceramics?
- d. State three materials use for making Ceramics?
- e. What is Electronic/Optical material?
- 3a. Enumerate six ways in which the properties of materials can be grouped?
- b. Give two examples of each of the properties in (3a) above?
- c. State two uses of the following gases?
- Oxygen - Nitrogen - Helium - Argon - Carbon-dioxide
- d. What are Meta-materials?
- e. What are Glassy materials?
- 4a. Explain the following?
- Plasticity - Elasticity - Conductivity - Ductility - Brittle
- b. State five types of Plastics?
- c. What are Super-plastics?
- d. Enumerate two modes of deformation as apply to materials?
- e. State five properties of Ethanol?
- 5a. Explain the term Wood?
- b. List four methods of Wood preservation?
- c. State five of properties of Wood?
- d. Enumerate four types of Leather?
- e. What are Nano-materials?
- 6a. Explain the term Cement?
- b. Write short note on the followings?
- Natural Cement - Artificial Cement
- c. State two types of dislocation?
- d. What are dislocations as it refers to materials?
- e. What is Necking as it apply to metal?