



FACULTY: ENGINEERING
SEMESTER 2 EXAMINATIONS (JULY 2016)
2015 / 2016 ACADEMIC SESSION

COURSE CODE: GNE 202

COURSE TITLE: WORKSHOP PRACTICE AND
MANUFACTURING TECHNOLOGY

DURATION: 2 Hours

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HOD'S SIGNATURE

INSTRUCTIONS:

1. YOU ARE TO ANSWER ANY **FOUR** QUESTIONS OUT OF **SIX**.
2. SEVERE PENALTIES APPLY FOR MISCONDUCT, CHEATING, POSSESSION OF UNAUTHORIZED MATERIALS DURING EXAM.

1. (a) Define the term "safety" in the workshop 2 marks
 (b) Differentiate between safety and accident. 2 marks
 (c) List any six (6) safety rules adopted within a workshop environment 3 marks
 (d) Enumerate any three (3) advantages and disadvantages of safety practices in the workshop using Nigeria as a case study 3 marks
 (e) Explain the importance of the following safety gadget (i) Laboratory coat (ii) Safety boot (iii) Eye goggle (iv) Nose mask (v) Hand gloves 5 marks
2. (a) Define the term "carpentry" 1½ marks
 (b) Explain the usefulness of the following tools in Carpentry (i) F-Clamp (iii) Hand saw (iii) Pincers (iv) ~~Chaw~~ bar (v) Jack plane (vi) Engineering square. 6 marks
 (c) Explain with a neat sketch the following joints (i) Lap dovetail joint (ii) mortise and Tenon (iii) Bridle (iv) ^{Miter} Miter (v) Groove and tongue. 7½ marks
3. (a) What is engineering workshop practice? 1 mark
 (b) Briefly discuss the functions of a Production planner 2 marks
 (c) With a schematic block diagram explain the various components of a production control system. 3 marks
 (d) Briefly explain with a sketch the relationship between the types of production systems. 3 marks
 (e) Distinguish between jobbing, batch and mass production using the five (5) important characteristics of each of the production system. 6 marks
4. (a) List any four (4) commonly used blacksmith tools. 2 marks
 (b) List any five (5) types of metal shaping operations that can be conducted with the blacksmith technology 2½ marks
 (c) What should be the essential qualities of a rivet and its material? 1½ marks
 (d) Discuss any five (5) commercially available rivet forms and their applications. 5 marks
 (e) What are the uses of snap headed, counter shank headed, conical headed and pan headed rivets? 4 marks
5. (a) What is welding? 2 marks
 (b) List five (5) advantages of welded joints over riveted joints. 2½ marks
 (c) What is braze welding? Differentiate between brazing and soldering. 2 marks
 (d) List five (5) types of brazing. 2½ marks
 (e) List any eight (8) equipment/tools needed for arc welding in the workshop. 4 marks
 (f) Differentiate between reverse and straight polarity. 2 marks
6. (a) List any six (6) marking out tools and any six (6) measuring tools used in the workshop and sketch any two (2) of each of them. 8 marks
 (b) Explain the steps involved in carrying out the drilling of a 6 mm hole on a sheet metal plate. 4 marks
 (c) Discuss the three (3) types of flames as obtainable in oxy-acetylene welding. 3 marks