



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
Plot 91 Cadastral Zone, Nnamdi Azikwe Express Way, Jabi, Abuja.  
**FACULTY OF EDUCATION**  
**2020\_1 Semester**

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**COURSE CODE: SED329**  
**CODE TITLE: INTEGRATED SCIENCE WORKSHOP**  
**CREDIT UNIT: 3**  
**TIME ALLOWED: 2 Hours 30 Minutes**  
**INSTRUCTION: Answer questions ONE and any other THREE questions.**

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**QUESTIONS**

1 (a) Based on your experience as an integrated science student compare these constructs *novice* and *expert postulates* of Dreyfus model of skill acquisition **(8 marks)**

1(b) Elucidate two major methods of blowing glass **(8 marks)**

1(c) From your knowledge of tools in metal workshop, state any five (5) properties of metals **(5 marks) 1 mark each**

1(d) Haven't learned about four (4) major safety measures in the workshop during the last field trip, outline four (4) of them. **(4 marks)**

2(a) In view of Robert Boyle Skeptical Chymist in (1661) describe the method of producing wood alcohol and its uses **(10 Marks)**

2(b) With reference to your activities in carpentry workshop, state five (5) major tools carpenters and cabinet makers use in doing their work. **(5marks)**

3(a) As a scientist, how would you describe the procedures for constructing glass apparatus during the workshop in science education department **(5 marks)**

3(b) Enumerate any five (5) possible components of electronic device used by the electrician in his workshop. **(5marks)**

3(c) As an entrepreneur state at least 4 characteristics that you are expected to exhibit in the society. **(5marks) 1 mark each**

4(a) Briefly give account of the primary light and pigment colours with their possible derivable colours in the science laboratory occur. **(5marks)**

4(b) Skills acquisition have been of great benefits to the learner, as an individual that venture into developing a skills and persevere to complete the procedural requirements, state at least five of these benefits **(5marks) 1 mark each**

4(c) How can a teacher enhance the skill possessed by a learner on a task? **(5marks) 1 mark each**

5(a) If you are invited as a scientist into workshop organized science education department of National Open University of Nigeria, how would you describe the effects of cold working and hot working of metal **(10 marks)**

5(b) State at least five processes involved in the surface finishing for metals **(5 marks) 1 mark each**