

B.Sc. FOOTWEAR TECHNOLOGY (BSCFWT)**Term-End Examination**

00091

June, 2014

BFW-036 : APPLIED SCIENCE*Time : 3 hours**Maximum Marks : 70*

*Note : Attempt any **seven** questions. Use of calculator is permitted.*

1. What are the fundamental and derived units of measurement ? Convert one sq. meter into sq. decimeter. 10
2. Explain system of units with suitable examples. 10
3. Give the classification and modern concept of oxidation and reduction. What is oxidation number ? 10
4. A survey was conducted by a group of students as a part of their environment awareness programme, in which they collect the following data regarding the number of plants in 20 houses in a locality. Find the mean number of plants per house.

No. of plants	0 - 2	2 - 4	4 - 6	6 - 8	8 - 10	10 - 12	12 - 14
No. of houses	1	2	1	5	6	2	3

Which method will you use for finding the mean and why ? 10

5. What is ionic bonding ? Give the properties of ionic compounds. What is the difference between an ion and an atom ? 10
6. What do you understand by the following terms ? $4 \times 2 \frac{1}{2} = 10$
- (a) Electron affinity
 - (b) Electronegativity
 - (c) Hydrogen bonding
 - (d) Co-ordinate covalent bond
7. Write the characteristics of ergonomics. 10
8. What is an addition polymer ? How is polyethylene formed from ethylene monomers ? Give relevant steps.
9. For a normal distribution, prove that Mean = Mode = Median. 10
10. A hall is 15 meters long and 12 meters broad. If the sum of the area of floor and the ceiling is equal to the sum of the areas of the four walls, then what is the volume of the hall ? 10
-