Lesson plan of 5th sem

(glass technology)

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| sl  NO. | TOPIC | REFERANCE | ASSIGMENT | COMMENT |
| 1. 1 | .Define Glass & Glassy state | TB.RB | Yes | One period |
|  | Historical background of Glass | TB | No | Two period |
|  | Glass Industries in India and the present status | TB | No | One period |
|  | Describe the major ingredients for glass making | TB,RB | Yes | `One period |
|  | Describe the minor ingredients used for glass making | TB,RB | yes | One period |
|  | Define Cullet and its use in glass making | TB | Yes | One period |
|  | Describe selection of glass composition for various types of glasses | TB,RB | No | One period |
|  | Properties of glass sand for glass making. | TB | No | One period |
|  | Impurities in glass raw materials and their influence in glass making. | TB | Yes | One period |
|  | Calculation of batch of raw materials for making glass | TB | Yes | Three period |
|  | Process of glass formation | TB,RB | Yes | One period |
|  | Refining of glass | TB | Yes | One period |
|  | De-colorization of glass | TB,RB | Yes | One period |
|  | Role of viscosity in glass melting. | TB | No | One period |
|  | Glass melting furnaces | TB,RB | yes | One period |
|  | Glass Tank Furnace & Glass pot furnace | TB,RB | Yes | One period |
|  | De-vitrification of Glass | TB,RB | Yes | One period |
|  | Various methods used for making glass products | TB | No | One period |
|  | Manufacture of glass by blowing process . | TB,RB | Yes | One period |
|  | Float process | TB | Yes | One period |
|  | Various moulds for glass making | TB | No | One period |
|  | Manufacturing of glass bottle, sheet glass, thermo flask, electric bulb. | TB,RB | Yes | Two period |
|  | Manufacturing of fiber glass, glass wool. | TB | Yes | One period |
|  | Layout of modern glass plant. | TB,RB | yes | One period |
|  | Define Annealing and Toughening of Glass & Aim of annealing. | TB,RB | Yes | One period |
|  | Describe the process of annealing in details. | TB | No | One period |
|  | Explain tempering of glass by various methods. | TB | yes | One period |
|  | State and explain Chemical & mechanical toughening of glass. | TB | yes | One period |
|  | Describe the following properties of glass in detail  a) Viscosity. | TB | yes | One period |
|  | b) Thermal expansion | TB | No | One period |
|  | c) Density. | TB | Yes | One period |
|  | d) Optical properties. | TB | Yes | One period |
|  | e) Chemical durability | TB | No | One period |
|  | Testing of defects of glass by visual observation | TB | Yes | One period |
|  | Blistering, cords, stones in glass. | TB | Yes | One period |
|  | Determination and observation of strain in glass. | TB | No | One period |
|  | Measurement of thermal shock resistance of glass | TB,RB | Yes | One period |
|  | Testing of viscosity of glass. | TB | Yes | One period |
|  | Testing of density of glass. | TB,RB | Yes | One period |
|  | Testing of strength of glass. | TB | No | One period |
|  | Durability of glass | TB | Yes | One period |
|  | Describe the following methods of glass decoration in brief. a) Polishing | TB | No | One period |
|  | b) Grinding c) Etching | TB | Yes | One period |
|  | d) Sand Blasting e) Engraving | TB | Yes | One period |
|  | f) Cutting g) Staining | Tb | yes | One period |
|  | h) Enameling | Tb | Yes | One period |
|  | Define special glass. | Tb,Rb | Yes | One period |
|  | Describe the characteristics and application of the following glasses:- a) Borosilicate glass | TB,RB | No | One period |
|  | b) Pyrex glass | Tb | yes | One period |
|  | c) Heat resisting glass | Tb | No | One period |
|  | d) Coloured glass | TB | No | Half period |
|  | e) Ruby glass | TB | No | Half period |
|  | f) Laminated glass | TB | Yes | One period |

1 Hand book of glass manufacturers Vol I & II F.V Tooley Ogden Publishing co. New York (TB)

2 Modern Glass Practice Samuel R. Scholes CBI Publishing Co. INC (TB)

3 Hand book of Glass BY R. Charan B H U, Banaras (TB)

4 Glass BY Shand Mc Grawhill (TB)

5 CHEMISTRY OF GLASS A . PAUL Ashlee Pub. C (RB)

6.Introduction to glass science and technology by J.E.Shelby (RB)

7.Handbook of ceramic by S.KUMAR (RB)

8. . Engineering Chemistry P.C. Jain and Monica Jain. Dhanpat Rai Publisher(RB)

Classes are taken with 56 periods. one period is for internal test conducted and 03 period is for revision of syllabus.