

Bachelor of Vocation in Pottery & Ceramic Examination, 2019

Semester - II

Ceramic Technology-I

Course: B.Voc-II/02

Time: Three Hours

Full Marks: 80

Questions are of value as indicated in the margin.

Question no. 1 is compulsory and answer any three from the rest

1. Answer any ten 2x10=20
 - a) Write the chemical formula of montmorillonite and talc.
 - b) Write the name of one substitute of feldspar.
 - c) Write the name of the major phases present in fired porcelain body.
 - d) What is flux?
 - e) Why fritting is done?
 - f) Which Oxide mainly responsible for red colour is oxidising atmosphere?
 - g) Define secondary clay.
 - h) Why secondary clay is more plastic than primary clay?
 - i) Write the theoretical composition of Kaolin.
 - j) Is firing ceramics a chemical change?
 - k) How do you make clay waterproof?
 - l) Fire clay is a disorder kaolinite—True/False.
 2.
 - a) What is clay? What are the most prominent properties of clay? 2+3=5
 - b) What is zircon? What is the significance of its use in ceramic Industry? 1+4=5
 - c) Define primary clay. How does it form? 2+6=8
 - d) Write the formula of Gypsum. 2
 3.
 - a) What is the source of good quality bone ash?
 - b) Write the approximate formula of bone ash.
 - c) Mention the raw materials used for making bone china bodies with probable composition.
 - d) Briefly describe bone china manufacturing process.
 - e) Write the importance of plaster of paris. 1+2+4+8+5=20
 4.
 - a) Write the differences between quartz, flint and silica sand. State their availability in India. 2+3=5
 - b) Write the differences between Ball clay and China clay. 5
 - c) Draw the structure of kaolinite. 10
 5. Discuss 5x4=20
 - a) Why ball clay is more plastic than china clay?
 - b) Why pottash feldspar is preferably used in pottery body?
 - c) Why clay minerals are plastic?
 - d) Why montmorillonite shows swelling properties?
 - e) Why a considerable amount of talc is used in ceramic cooking ware?
 6. What are the main function of clay, quartz and feldspar in a pottery body? State the characteristics for selection of these raw materials along with their approximate percentage range used to prepare a suitable pottery body. 9+8+3=20
 7. Name the important raw materials used as a fluxing agent in pottery composition. State the empirical formula of different types of feldspar. Calculate the theoretical percentage of alkali in soda and potash feldspar. 4+6+10=20
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