

Bachelor of Vocation in Pottery & Ceramic Examination, 2019

Semester - IV

Ceramic Technology-III

Course: B.Voc-IV/03

Time: Three Hours

Full Marks: 80

Questions are of value as indicated in the margin.

Question no. 6 is compulsory and answer any four from the rest

1. Explain why glazes are applied on pottery ware. How glazes materials are classified? Give one example of each group. Draw a flow sheet for the stain preparation. 4+2+2+8=16
 2. What is stain? Write the main differences between underglaze stain and onglaze stain. Describe the process of stain preparation in detail. Give one approximate composition of blue stain. 2+4+8+2=16
 3. Briefly describe any two glaze application technique. Describe different types of glaze defects and suggest remedies. 6+10=16
 4. Discuss the advantages and disadvantages of using lead as a glaze material. What are the main purposes of fritting a glaze composition? What are the main factors of preparing a stable glaze slip? 8+4+4=16
 5. Write notes on any two : 8+8=16
 - (a) Fritting rules
 - (b) Opacifiers
 - (c) Malt glaze
 - (d) Feldspar
 6. The empirical formula of a raw lead glaze is given below: 16

0.60 PbO
0.30 ZnO 0.22 Al₂O₃ 2.10 SiO₂ 0.10 CaO

Calculate the batch composition taking the usual raw materials.
[At. wt.: Pb.207, Zn - 65.4, Ca-40, Si -28, Al- 27, O-16]
 7. (a) What is semiconducting glaze and on which body it is applied ? How does it differ from traditional porcelain glaze?
(b) What is engobe and how is it applied? (6+4)+6 = 16
 8. Briefly discuss the effect of the following oxides on glaze and colour: 4x4=16

(a) B₂O₃ (b) CaO (c) SiO₂ (d) Na₂O
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