

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain frit making process.

Q.24 Name different types of clays. Write properties and uses. Write its impurities.

Q.25 Name different types of processing additives. Write types and role of each additive.

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3rd Sem / Ceramic Engineering

Subject : Ceramic Raw Materials

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 _____ is example of non plastic raw materials.

- a) Clay
- b) Bentonite
- c) Silica Sand
- d) Both b & c

Q.2 Frit making process involves :-

- a) Raw material mixing
- b) Smelting
- c) Quenching
- d) All of these

Q.3 Which of the following has highest plasticity?

- a) Bentonite
- b) Ball clay
- c) China clay
- d) Quartz

Q.4 Formula of Soda feldspar is

- a) $\text{Na} \square \text{O} \cdot \text{SiO}_4$
- b) $\text{Na} \square \text{O} \cdot \text{Al} \square \text{O} \square \cdot 6\text{SiO}_4$
- c) $\text{K} \square \text{O} \cdot \text{H} \square \text{O}$
- d) All of these

Q.5 Purpose of fritting is to convert _____

- a) Soluble raw materials into insoluble form.
- b) Fine raw materials into bulky form.
- c) Toxic raw materials in to less toxic or non toxic form
- d) All of these

Q.6 Which of the following is industrial waste materials which is used as raw materials in Ceramic industry.

- a) Fly Ash
- b) Blast Furnace slag
- c) Grog
- d) All of these

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. $(6 \times 1 = 6)$

Q.7 Binder increases green strength of body. (True/False)

Q.8 Formula of clay is $\text{Al} \square \text{O} \square \cdot 2\text{SiO}_4 \square 2\text{H}_2\text{O}$. (True/False)

Q.9 Ball clay is _____ plastic raw materials in comparision to China clay. (More / Less)

Q.10 The formula of sand is _____.

Q.11 _____ is one of the raw materials of silica used in body. (Quartz / Bone ash)

Q.12 _____ is the industrial waste materials used as raw materials in Ceramic Industry. (Fly ash / Quartz)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. $(8 \times 4 = 32)$

Q.13 Define residual and transported clays.

Q.14 Explain benefication of clay.

Q.15 Write properties and uses of talc.

Q.16 List properties and uses of bone ash.

Q.17 Explain role of flux in Ceramic Industry.

Q.18 Write role of binder and lubricants in Ceramic Industry.

Q.19 Write sources of alumina.

Q.20 Name four synthetic raw materials.

Q.21 Write properties and uses of sillimanite.

Q.22 Define flux. Write different types of flux.