

- Q.29 Give names of four types of nuclear reactors?
 Q.30 Explain the phenomenon of Piezoelectric.
 Q.31 Explain developing of high super conductivity.
 Q.32 Give the classification of modern, ceramics.
 Q.33 Explain in brief thick film capacitor?
 Q.34 Explain the meissner effect.
 Q.35 Draw flow diagram for manufacturing of thermistors.

Section-D

Note: Long answer questions. Attempt any two questions out of three Questions. (2x10=20)

- Q.36 Explain manufacture of multilayer capacitor.
 Q.37 Define nuclear reactor and name ceramics materials used in its various parts.
 Q.38 Explain manufacture of Ferrites.

No. of Printed Pages : 4

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Roll No.

**5th Sem., Branch : Ceramic
 Subject : Modern Ceramics**

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice Questions. All Questions are compulsory. (10x1=10)

- Q.1 Modern Ceramic material are used in
 a) Space b) Automobile
 c) Nuclear reactors d) In all of these
- Q.2 Superconductor can be used in
 a) Transmission b) Power generation
 c) Mobile towers d) All of these
- Q.3 Hard ferrites have
 a) Low power loss b) Low resonance
 c) Low Coercivity d) High Coercivity
- Q.4 Bio ceramics are materials which are used for _____
 diseased body parts.
 a) Repair b) Reconstruction
 c) Both A & B d) None of these
- Q.5 Function of control rod in nuclear reactor is to
 a) Start nuclear reactor b) Stop reactor
 c) Absorb electrons d) All of these

- Q.6 Which of the following product is not modern ceramics
 a) Wall tiles b) Floor tiles
 c) Sanitary ware d) All of these
- Q.7 Which sensor is used to protect devices from over voltage?
 a) Thermistors b) Resistors
 c) Pyroelectric d) Variastors
- Q.8 The newer ceramic are fabricated (Shaped) by
 a) Isostatic pressing b) Hot pressing
 c) Tape casting d) All of these
- Q.9 Varistors are used in
 a) Timers b) Computers
 c) None of these d) In both A & B
- Q.10 PTC stands for
 a) +ve temp conductor
 b) +ve thermal coefficient
 c) Permanent temp change
 d) None of these

Section-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Nuclear fission reaction takes place nuclear reactor. (True/False)
- Q.12 Thermistor is temperature sensitive resistor. (True/False)

- Q.13 Resistance of super conductor is Zero. (True/False)
- Q.14 Speed of fast moving neutrons is controlled by moderators. (True/False)
- Q.15 Soft ferrites are anti ferromagnetic material. (True/False)
- Q.16 Ferrite is a example of modern ceramic material. (True/False)
- Q.17 Quartz is used in dental ceramics. (True/False)
- Q.18 Isostatic pressing is used to shape ceramic materials. ((True/False)
- Q.19 Pyroelectric materials are used in burglar alarms. (True/False)
- Q.20 Dielectric materials have high thermal conductivity. (True/False)

Section-C

Note: Short answer type Questions. Attempt any twelve questions out of fifteen Questions. (12x5=60)

- Q.21 Explain the difference between newer and conventional ceramics materials?
- Q.22 List functions of ceramic control rods.
- Q.23 Explain the properties of super conductor.
- Q.24 Name the ceramics materials used in various parts of nuclear reactors?
- Q.25 Define Ferrites.
- Q.26 Explain the properties of Barium Titanate.
- Q.27 Explain in brief manufacture of bioceramics.
- Q.28 What is the capacitor and how it works.