Q.24 Why moderator are used in nuclear reactors? Explain.
Q.25 Explain in brief manufacture of bio-ceramics.
Q.26 How dental ceramics are manufactured? Explain.
Q.27 Explain meissner effect with diagram.
Q.28 Classify Bio Ceramics.
Q.29 Explain phenomenon of piezoelectricity.
Q.30 Discuss manufacture of variastors.
Q.31 Differentiate hard and soft ferrites.
Q.32 List five modern ceramics products.
Q.33 Enlist application of Soft ferrites.
Q.34 List functions of control rods in nuclear reactors.
Q.35 Discuss irradiation effect in nuclear reactors.

SECTION-D

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

Q.36 Explain phenomenon, properties and uses of superconductors.
Q.37 With the help of flow diagram, explain manufacture of soft ferrites.
Q.38 Explain manufacture, properties and uses of thermistors.

Roll No. .....

5th Sem / Branch : Ceramic Engineering
Sub. : Modern Ceramics

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Modern ceramics are made from raw material of
a) Control purity b) Impure raw materials
c) Both A & B d) None of the above

Q.2 The resistance of a superconductor is
a) I ohm b) 0 ohm
c) 10 ohm d) 2 ohm

Q.3 Classification of bio ceramics include
a) Bioinert ceramic
b) Surface reactive bio ceramics
c) Restorable bio ceramics
d) All of these

Q.4 A super conductor has zero permeability and expels (ejects) magnetic line of force emitted from a nearby magnet or coil. This phenomenon is known as _____.
a) Meissner Effect b) Irradtion effect
c) Electronics Effect d) Magnetic effect

Q.5 Superconductors can be used in

a) Beam weapons
b) Electric current transmissions
c) Power generation
d) All of the above

Q.6 The functions of control rods in Nuclear reactor is to

a) Start nuclear reaction
b) Absorb dangereous rays
c) Absorb electrons
d) Absorb protons

Q.7 _____ are used to reduce speed of fast fission neutrons

a) Moderators b) Fuel elements
c) Control Rods d) All of the above

Q.8 ____ is an example of Modern Ceramic

a) Ferrites b) Super conductors
c) Varsistors d) All of these

Q.9 MLC stands for

a) Multi layer Ceramics
b) Multi loss Ceramics
c) Multi Long Ceramics
d) All of the above

Q.10 Soft ferrites are used in _____.

a) SMPS b) LED
c) Electronic Ballast d) All of these

SECTION-B

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

Q.11 Raw materials of modern ceramics are of controlled purity and _____. (Size, shapes)

Q.12 _____ is an example of moderator. (Graphite/Water)

Q.13 Dental ceramics applications include filling cavity of teeth. (True/False)

Q.14 Superconductors can be used in defense. (True/False)

Q.15 Superconductors are used in MAGLEV trains. (True/False)

Q.16 Hard ferrites are used in _____. (Speakers, Mobile charger)

Q.17 Soft ferrites have _____ coercivity. (Low/High)

Q.18 Resistance of thermistors changes with change in temperature. (True/False)

Q.19 BIo-ceramics are used for repair and reconstruction of damaged body parts. (True/False)

Q.20 Resistance of variastors changes with change in _____. (Voltage/Temperature).

SECTION-C

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

Q.21 Discuss scope of modern ceramics.

Q.22 Differentiate advanced and traditional ceramics.

Q.23 Explain in brief manufacture of multi layer ceramics.