Q.25 Write applications of soft ferrites.

Q.26 Name ceramics materials used in various parts of nuclear reactors?

Q.27 Explain developing of high super conductivity.

Q.28 Describe electro-optic ceramics.

Q.29 Explain in brief manufacture of bioceramics.

Q.30 Explain the use of ceramic raw material in piezo electric.

Q.31 Explain in brief meissner effect.

Q.32 Give the applications of Bio-ceramics.

Q.33 Difference between pyroelectric & ferroelectric.

Q.34 Give classification of modern ceramics.

Q.35 Explain dielectric ceramics .

SECTION-D

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

Q.36 Explain manufacture of Ferrites.

Q.37 Explain applications of Super Conductors & its properties.

Q.38 Write short note on the following :

a) Irradiation affect

b) Phenomenon of super conductivity

Roll No. .....

Ceramic Engg

Subject:- Modern Ceramics

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Modern Ceramics material are used in

a) Space b) Automobile

c) Nuclear reactors d) all of these

Q.2 Hard ferrites have

a) Low power loss b) Low resonance

c) Low coercivity d) high coercivity

Q.3 Which of the following product is not modern ceramics

a) Wall tiles b) Floor tiles

c) Sanitary ware d) All of these

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 Superconductivity was first observed by

a) H.K. Onnes b) Ohm

c) Ampere d) Schrieffer

Q.6 In nuclear reactor speed of fast moving neutrons are controlled by

a) Control rods b) Moderators

c) Coolant d) All of above

Q.7 The newer ceramic are fabricated (shaped) by

a) Isostatic pressing b) hot pressing

c) tape casting d) All of these

Q.8 Superconductor can be used in

a) Transmission b) Power generation

c) mobile towers d) All of these

Q.9 Example of ceramic material used in safety rods is

a) Refractory borides

b) Rare earth metal oxide

c) Boron carbides

d) All of these

Q.10 Varistors are used in

a) Timers b) Computers

c) None of these d) in both A & B

SECTION-B

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

Q.11 Soft ferrites are anti-ferromagnetic material. (True /False)

Q.12 Ferrite is a example of modern ceramic material. (True/False)

Q.13 PLZT means Lead Lanthanum Zirconia Titanate. (True/False)

Q.14 Nuclear fission reaction takes place nuclear reactor. (True/False)

Q.15 Above critical magnetic field superconductors behave as normal conductor. (True/False)

Q.16 Resistance of super conductor is Zero.(True/False)

Q.17 Quartz is used in dental ceramics. (True/False)

Q.18 Speed of fast moving neutrons is controlled by moderators. (True/False)

Q.19 Dielectric materials have high thermal conductivity. (True/False)

Q.20 Thermistor is temperature sensitive resistor. (True /False)

SECTION-C

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

Q.21 Write working of fuel elements in nuclear reactor and name of fuel elements.

Q.22 Explain the working of Resistors.

Q.23 Discuss development of high temperature of super conductors.

Q.24 What are fuel elements in nuclear reactor?