CODE NO : D42510

2007 CALICUT UNIVERSITY

B.TECH ELECTRICAL AND ELECTRONICS ENGINEERING

HIGH VOLTAGE ENGINEERING

DECEMBER 2007

TIME::3 HOUR
MARK:100

ANSWER ALL QUESTIONS

1.a) explain the electron emission in vacuum.

b) what is the cavitation and bubble theory of liquid dielectric.

c) give the circuit of impulse wave generating circuit using R,L and C.

d) give the specification of standard switching surge wave form.

e) explain the operation of series capacitance voltmeter for measuring a.c voltage.

f) what is electrostatic voltmeter? explain.

g) list out the high voltage testing of generators.

h) explain the role of ground wires for the protection of overhead lines. [MARKS 8*5=40]

2.a) explain the break down mechanism in liquid break down.

OR

b) what is composite dielectric? explain its properties.

3.a) explain the measurement of impulse voltage using R and R-C dividers.

OR

b) derive the equation for voltage drop and regulation of cascaded voltage multiplier circuits.

4.a) detail the different circuits for producing switching surges.

OR

b) with neat diagram explain the operation of series resonant transformer.

5.a) with a neat diagram explain the use of schering bridge for the measurement of dielectric loss.

OR

b) explain the method of RIV measurement in H.V device. [MARKS 4*15=60]