PCB

UNIT – 2

ONE WORDS

1) The field of_____involves the use of semiconductor devices such as diodes, transistors and thyristors.

a) power electronics b) semiconductor electronics c) electronics d) either a or c

2) GUNN diode was discovered by _____ .

a) Albert Einstein b) J.R.B Gunn c) Newton d) J.B.Gunn

3) GUNN EFFECT is effectively utilized in the GUNN diode for generation of oscillations.

a) infrared wave b) microwave c) mechanical wave d) electromagnetic wave

4)_____ was the first instance of useful semiconductor device operation depending on the bulk properties of a material.

a) GUNN diode b) Zener diode c) IMPATT diode d) Tunnel diode

5) The Schottky diode is also known as _____diode.

a) cold carrier b) hot air carrier c) cold air carrier d) hot carrier

6) The Schottky diode is commonly used in _____ at frequencies of 20GHz.

a) switching power supplies b) switching frequency c) both a and b d) none of the above

7) IMPATT diode stands for_____.

a) IMPact Active and Transit Time diode b) IMPact Avalanche Terminal Time diode c) IMPact Avalanche and Transit Time diode d) IMPact Audio and Time Track diode

8) IMPATT diode is also known as_____.

a) Avalanche diode b) GUNN diode c) Schottky diode d) Zener diode

9) Thyristor is a semiconductor device having _____ junctions.

a) two or more b) three or more c) four or more d) more than four

10) PNPN diode acts as a _____during forward bias condition.

a) rectifier b) transistor c) resistor d) switch

11) Shockley diode is also known as_____diode.

a) NPN b) PNPN c) PN d) Zener

12) SCR is a_____with_____device.

a) 4-layer, 3 terminal b) 3-layer, 4 terminal c) 4-layer, 4 terminal d) 3-layer, 3 terminal

13) In SCR P-layer acts as _____ and N-layer acts as .

a) cathode, anode b) both a and c c) anode, gate d) anode, cathode

14) How many types of thyristors rating are there?

a) 2 b) 3 c) 4 d) 5

15) The value of Voltage Safety Factor (Vf) normally lies between_____and____.

a) 2 and 2.7 b) 3 and 3.5 c) 1.2 and 2.1 d) 2 and 2.3

16) The N- region in power BJT has a thickness of about_____.

a) 500um b) 500-700um c) 50-200um d) 700um

17) The thickness of the drift region (n-) in power BJT determines the _____ of the transistor.

a) avalanche voltage b) voltage c) cut-off voltage d) breakdown voltage

18) Power MOSFET is a specific type of _____.

a) VMOSFET b) BJT c) MOSFET d) DMOSFET

19) The structures of power MOSFET are_____.

a) CMOS and DMOS b) CMOS and VMOS c) DMOS and VMOS d) None of the above

20) The three most popular monolithic diodes are

a) emitter-base with collector shorted to base b) emitter-base with collector open c) collector-base with emitter open circuited d) all the above

21) In the monolithic diode, _____is very popular for the fabrication of diode.

a) collector-base b) emitter-base c) collector-emitter d) collector-base-emitter

22) A resistor in a monolithic IC is obtained by utilizing the_____of the diffused area.

a) bulk conductivity b) bulk inductivity c) bulk resistivity d) none of the above

23) In monolithic resistor, the resistance value is given by

a) Rs.l/w b) w/Rs.l c) Rs.w/l d) l/Rs.w

24) The capacitance C in monolithic capacitor is directly proportional to _____ and inversely proportional to_____ .

a) thickness of depletion layer, cross section area b) cross section area, thickness of depletion layer c) both a and b d) either a or b

25) In monolithic capacitor the capacitance value can be around_____ .

a) 12nF/mm2 b) 15nF/mm2 c) 1.5nF/mm2 d) 1.2nF/mm2