

**CHAPTER 13 : MODERN PHYSICS AND ELECTRONICS****Instructions:**

- ✓ Read the chapter in your book - quickly and thoroughly, preferably more than once.
- ✓ Contact me in case of any difficulties in understanding.

(Questions given in this worksheet are important questions for all exams)

---

**MCQs**

(Solve Yourself)

- 61.** What is the function of a camera in television transmission?
- a) to convert the sound waves into picture
  - b) to convert the picture into sound wave
  - c) to convert the electrical signals into picture
  - d) to convert the picture into electrical signal
- 62.** Which one of the following is the function of a rectifier?
- a) increase the electric current
  - b) amplify voltage
  - c) decrease the electric current
  - d) makes the electric current unidirectional
- 63.** What is n-p-n ?
- a) diode
  - b) transistor
  - c) triode
  - d) rectifier
- 64.** Which basic colours in are there in colour television camera?
- a) red, green and orange
  - b) red, blue and green
  - c) red, green and yellow
  - d) red, green and violet
- 65.** Which is a semi conductor?
- a) segeum
  - b) germanium
  - c) glass
  - d) plastic

- 66.** Which scientist invented first vacuum tube applying Adison's action?  
a) Becquerel  
b) Newton  
c) Fleming  
d) Madam Curie
- 67.** Which metal transforms by the process of disintegration of radioactivity of radium?  
a) copper  
b) zinc  
c) lead  
d) boron
- 68.** The speed of which of the following is equal to the speed of light?  
a) alpha particle  
b) beta particle  
c) gamma particle  
d) neutrino
- 69.** What is the charge of alpha particle?  
a)  $9.11 \times 10^{-31} \text{ C}$   
b)  $3.2 \times 10^{-19} \text{ C}$   
c)  $3 \times 10^8 \text{ C}$   
d)  $3.2 \times 10^{19} \text{ C}$
- 70.** How many kinds of phosphor granules are used to make a colour television screen?  
a) 1  
b) 2  
c) 3  
d) 4
- 71.** What is the mass of the beta particle?  
a)  $9.11 \times 10^{-31} \text{ kg}$   
b)  $3.2 \times 10^{-19} \text{ kg}$   
c)  $9.11 \times 10^{-10} \text{ kg}$   
d)  $3.2 \times 10^{19} \text{ kg}$
- 72.** What is the number of proton contained in human body?  
a)  $10^{28}$   
b)  $10^{20}$   
c)  $10^{29}$   
d)  $10^{19}$
- 73.** In which of the following rahim43@yahoo.com is used as an address?  
a) Fax  
b) Internet  
c) E-mail  
d) G-mail
- 74.** Which scientist invented the radio-activity of uranium?  
a) Max plank  
b) Becquerel  
c) Albert Einstein  
d) Neil Bohr's
- 75.** What is the use of diode?  
a) switch  
b) amplifier  
c) storage  
d) charger
- 76.** Who invented triode?  
a) Lee de Forest  
b) Newton  
c) Archimedes  
d) Maxwell
- 77.** Which is the most used semiconductor?  
a) germanium  
b) antimony  
c) bismuth  
d) silicon
- 78.** Which ray is not discharged from the nucleus?  
a) alpha  
b) beta  
c) gamma  
d) X-ray

**79.** From the nucleus of which metal did Henry Becquerel discovered the existence of radioactive rays?

- a) radium
- b) thorium
- c) radon
- d) uranium

**80.** How many cm of air can be penetrated by an alpha particle?

- a) 5
- b) 6
- c) 7
- d) 9

**81.** An isotope of uranium emits alpha ray for which it is converted into the following isotope -

- a) barium
- b) thorium
- c) polonium
- d) rubidium

**82.** What is the atomic mass of uranium?

- a) 90
- b) 91
- c) 92
- d) 93

**83.** The antiparticle of neutrino is called -

- a) positron
- b) antineutrino
- c) proton
- d) neutron

**84.** The ionization power of which of the following is the greatest?

- a) alpha ray
- b) beta ray
- c) gamma ray
- d) X-ray

**85.** How many electrode does a triode have?

- a) 1
- b) 2
- c) 3
- d) 4

**86.** Due to radioactive radiation of an element -

- i. atomic number decreases
- ii. atomic number increases
- iii. mass number decreases

Which one is correct?

- a) i and ii
- b) i and iii
- c) ii and iii
- d) i, ii and iii

**87.** Helium nucleus contains -

- i. two protons
- ii. two neutrons
- iii. one proton

Which of the following is true?

- a) i and ii
- b) i and iii
- c) ii and iii
- d) i, ii and iii

**88.** Alpha particle -

- i. can create intense ionization
- ii. penetration power is less
- iii. can create free electron

Which one is true?

- a) i and ii
- b) i and iii
- c) ii and iii
- d) i, ii and iii

**89.** Beta Particle's charge is -

- i. positive
- ii. negative
- iii. equal to electron charge

Which of the following is true?

- a) i and ii
- b) i and iii
- c) ii and iii
- d) i, ii and iii

**90.** Due to discharge of beta particle -

- i. a neutron decreases from a nucleus
- ii. a proton decreases from a nucleus
- iii. nucleon number remains the same

Which one is true?

- a) i and ii
- b) i and iii
- c) ii and iii
- d) i, ii and iii