



Physics

Worksheet 2 : 21/10/2020

Class - X

## CHAPTER 14 : PHYSICS TO SAVE LIFE

### 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)

- 1.** What is concerned to scientist Jagadish Chandra Bose?
- i. Establishment of Bose Mandir
  - ii. Uses of radioactive element
  - iii. invention of Crescograph

Which one is correct?

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

- 2.** Sir Jagadish Chandra Bose was -
- i. famous physicist
  - ii. successful biologist
  - iii. successful philosopher

Which of the following is correct?

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

- 3.** Who is the first internationally recognized scientist in the sub-continent?

- a) Jagadish Chandra Bose
- b) Satyendranath Bose
- c) Sharat Chandra Bose
- d) Subhash Chandra Bose

- 4.** What did Jagadish Chandra Bose use at first to detect radio signal?

- a) semiconductor junction
- b) diode
- c) full conductor junction
- d) full conductor diode

- 5.** For what is Crescograph used?

- a) to record the growth of plants
- b) to record the growth of animal
- c) to diagnose human disease
- d) to observe the sky

6. Which of the following is written by Jagadish Chandra Bose?

- a) All about
- b) Response in the living and non-living
- c) War and Peace
- d) Origin of Species

7. Which of the following is a special filter machine?

- a) Kidney
- b) heart
- c) stomach
- d) liver

8. Bones and muscles of the body works as like as which one?

- a) liver
- b) machine
- c) stick
- d) hydraulic pressure

9. Who discovered X-ray?

- a) Becquerel
- b) Rontgen
- c) Stephen Hawking
- d) Einstein

10. In which year was X-ray discovered?

- a) 1885
- b) 1895
- c) 1890
- d) 1905

11. What is the wavelength of X-ray?

- a)  $10^{-10}$  m
- b)  $10^{-8}$  m
- c)  $10^{-6}$  m
- d)  $10^{-4}$  m

12. Which ray is used to detect lung cancer?

- a) X-ray
- b) Gamma ray
- c) Beta ray
- d) Alpha ray

13. How many electrodes are present in a X-ray tube?

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

14. X-ray \_\_\_\_

- i. can penetrate through body muscles
- ii. can penetrate through bone
- iii. can create image on photographic plate

Which one is correct?

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

15. X-ray can identify -

- i. bone fracture
- ii. crack in bone
- iii. lung cancer

Which one is correct?

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

**16.** X-ray is a kind of \_\_\_\_\_ radiation.

- i. short wavelength
- ii. electromagnetic wave
- iii. high penetrating

Which one is correct?

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

**17.** Which one is painless and safe disease diagnosis method?

- a) MRI
- b) Endoscopy
- c) CT Scan
- d) X-ray

**18.** Which one is used for taking pictures of the internal part of human body?

- a) MRI
- b) Endoscopy
- c) CT Scan
- d) X-ray

**19.** Echo of sound is used on which process?

- a) CT Scan
- b) ECG
- c) MRI
- d) Ultrasonography

**20.** What is the frequency range of sound used in ultrasonography?

- a) 1-10 MHz
- b) 2-10 MHz
- c) 3-10 MHz
- d) 4-14 MHz

**21.** Transducer is energized by which energy?

- a) electrical energy
- b) heat energy
- c) solar energy
- d) light energy

**22.** Which one helps to detect uterine tumor?

- a) CT Scan
- b) MRI
- c) Ultrasonography
- d) X-ray

**23.** When ultrasound is used for examination of the heart, it is called -

- a) Ultrasonography
- b) Echocardiography
- c) Tomography
- d) Photography

**24.** The process by which an image of a slice or two dimensional part of three dimensional object is created is called -

- a) X-ray
- b) MRI
- c) Tomography
- d) Monography

**25.** CT Scan stands for -

- a) Circuit Tomography Scan
- b) Computed Tomography Scan
- c) Casual Tomography Scan
- d) Centre Tomography Scan

**26.** Through which liver, lung and pancreas cancer can be diagnosed?

- a) CT Scan
- b) MRI
- c) ECG
- d) Endoscopy

- 27.** The image created by CT Scan is -
- Two-dimensional
  - Three-dimensional
  - Multi-dimensional
  - One-dimensional
- 28.** Which one is used to detect any type of bleeding inside the brain?
- Ultrasonography
  - CT Scan
  - Tomography
  - MRI
- 29.** Whether there is a problem in the blood circulation can be known as -
- Ultrasonography
  - CT Scan
  - Tomography
  - MRI
- 30.** What kind of side effect occur if dye is used in CT Scan test?
- Feelings of fear
  - Allergic reaction
  - Feeling of vomiting
  - Problem of sinusitis
- 31.** Blockage of arteries is found by which test of heart?
- ECG
  - ETT
  - Angiography
  - Ultrasonography
- 32.** The technology to examine blockage in a fine blood vessel -
- Angiogram
  - Angioplasty
  - ETT
  - ECG
- 33.** Which of the following as an extremely valuable test to form an extended image of spinal cord?
- CT Scan
  - ECG
  - Ultrasonography
  - MRI
- 34.** Which one of the following uses radio wave?
- ECG
  - MRI
  - ETT
  - Angiography
- 35.** Which one is used to measure the rate and rhythm of heartbeats?
- MRI
  - ECG
  - CT Scan
  - Ultrasonography
- 36.** How many electrodes are used to get a complete picture of the heart?
- 9
  - 10
  - 11
  - 12
- 37.** How many electrical signals are identified to get a complete picture of the heart?
- 9
  - 10
  - 11
  - 12
- 38.** Which test is done when the heart is enlarged?
- Ultrasonography
  - ECH
  - CT Scan
  - Endoscopy

**39.** Endoscopy means -

- a) looking inside of something
- b) going inside of something
- c) looking outside of something
- d) going outside of something

**40.** By which process does the bright light of the endoscope machine enter the body cavity of patients?

- a) Reflection
- b) Total internal reflection
- c) Refraction
- d) image