NAT Grade 10 Reviewer

Science

Part 2

1. What type of electromagnetic waves is used in radar?

A. Infrared rays C. Radio waves

B. Microwaves D. Ultra-violet rays

Answer: C. Radio waves

2. Which electromagnetic wave carries more energy than the others?

A. Microwaves C. UV radiation

B. Infrared D. Visible light

Answer: C. UV radiation

3. A type of EM wave that is for medical use, to help doctors look inside the body to diagnose bone fractures and tumors.

A. Gamma rays C. Microwaves

B. X-rays D. Infrared

Answer: B. X-rays

4. This EM wave are very strong that can kill living cells, and are used to treat cancer through the process called radiotherapy.

A. Gamma rays C. Microwaves

B. X-rays D. Infrared

Answer: A. Gamma rays

5. What type of EM wave is used in remote control of TV, video, cassette recorders, and other electronic appliances?

A. Microwaves C. UV radiation

B. Infrared D. Visible light

Answer: B. Infrared

6. Electromagnetic waves are produced by _____

A. current C. any disturbance

B. voltage source D. vibrating charge

Answer: C. any disturbance

7. Which of the following forms of electromagnetic waves is used mostly in communication?

A. X-ray C. Radio wave

B. Infrared D. Gamma rays

Answer: C. Radio wave

8. In the electromagnetic wave, the direction of the propagation of the wave is _____.

A. always to the right.

B. cannot be determined.

C. parallel to electric and magnetic field direction.

D. perpendicular to the electric and magnetic field direction.

Answer: D. perpendicular to the electric and magnetic field direction.

9. Which of the following forms of electromagnetic waves has the widest frequency range?

A. x-ray C. ultraviolet

B. microwave D. radio waves

Answer: D. radio waves

10. What happens to the frequency of the electromagnetic wave if its wavelength increases?

A. decreases

B. increases as well

C. remains the same

D. cannot tell; frequency and wavelength are two different concepts

Answer: A. decreases

11. What EM wave makes cellular telephones transmit and receive signals?

A. radio waves C. visible light

B. microwaves D. gamma rays

Answer: A. radio waves

12. All of the following are uses of visible light. Which one is not?

A. it enables us to see things

B. gives light to the screen of our devices

C. for thermal imaging

D. used in optical fibers

Answer: C. for thermal imaging

13. Which kind of wave is used in night vision goggles?

A. microwave C. gamma ray

B. infrared D. visible light

Answer: B. infrared

14. Which of the following EM wave makes use of artificial lighting?

A. visible spectrum C. gamma rays

B. x-ray D. infrared

Answer: A. visible spectrum

15. Which of the following is a use of ultraviolet radiation?

A. diagnosing bone fracture

B. identifying original from fake banknotes

C. night vision goggle

D. optical fiber

Answer: B. identifying original from fake banknotes

16. Which type of X-ray can penetrate even through metals?

A. regular X-ray C. short wavelength X-ray

B. long wavelength X-ray D. dental X-ray

Answer: A. regular X-ray

17. What imaging technique uses powerful magnets, a computer, and radio waves to make detailed pictures inside your body?

A. thermal imaging C. Magnetic Resonance Imaging (MRI)

B. infrared imaging D. X-ray image

Answer: C. Magnetic Resonance Imaging (MRI)

18. In an infrared camera, what color indicates warmer temperature?

A. blue C. violet

B. green D. yellow

Answer: D. yellow

19. Which of the EM waves below are emitted by stars and some radioactive substances?

A. gamma rays C. microwave

B. radio waves D. X-ray

Answer: A. gamma rays

20. Which kind of wave causes the fluorescent chemicals to glow in sunlight?

A. microwave C. gamma ray

B. ultraviolet D. visible light

Answer: B. ultraviolet

21. Convex mirrors produce _____ images.

A. only virtual images C. only real images

B. virtual or real images D. inverted images

Answer: A. only virtual images

22. In ray diagramming, an incident ray that is parallel to the principal axis _____.

A. will reflect parallel to the principal axis

B. will reflect through the center of curvature

C. will refract through the focal point

D. will continue along the same path through the lens

Answer: A. will reflect parallel to the principal axis

23. If the angle of incidence is 10 degrees from the normal line, what is the angle of reflection and the total angle between the incident and reflected ray?

A. Angle of reflection = 30 C. Angle of reflection = 10

Total angle = 60 Total angle = 20

B. Angle of reflection = 40 D. Angle of reflection = 20

Total angle = 20 Total angle = 10

Answer: D. Angle of reflection = 20, Total angle = 10

24. A ray that shows the direction that light travels after it has crossed over the boundary.

A. Refracted Ray C. angle ray

B. Incident Ray D. Normal Ray

Answer: A. Refracted Ray

25. The bending of light as it passes from one transparent substance into another

A. Reflection C. Refraction

B. Focal D. Vertex, V

Answer: C. Refraction

26. The geometric center of the lens

A. Focus, F C. Ray

B. Focal length D. Vertex, V

Answer: D. Vertex, V

27. What happens to the light rays that pass through a convex lens?

A. All the light rays diverge

B. All the light rays converge

C. All the light rays are absorbed by the lens

D. Some light rays diverge, and some light rays converge

Answer: B. All the light rays converge

28. Describe the image that is produced by a concave lens.

A. It is upright and larger than the object

B. It is upright and smaller than the object

C. It is upside down and larger than the object

D. It is upside down and smaller than the object

Answer: B. It is upright and smaller than the object

29. A concave lens reflects light rays

A. Towards the normal

B. Away from the normal

C. Along the normal

D. None of the above

Answer: D. None of the above

30. A concave lens reflects light rays

A. Towards the normal C. Along the normal

B. Away from the normal D. None of the above

Answer: B. Away from the normal