



**GOVERNMENT COLLEGE(A) RAJAHMUNDRY**  
**DEPARTMENT OF PHYSICS**  
**CORE ASSESSMENT TEST - Aug 2024**      **Max.Marks: 50**

Name of the Student:

Program Name:

OAMDC No:

**Section-A ( Multiple Choice Questions)**

1. The meaning of Greek word 'Physics' is  
A. Matter    B. Energy    C. Nature    D. Sky.
2. One Kilobyte is equal to  
A. 1000 bits    B. 1024 bytes    C. 1024 bits    D. 100 bytes
3. In the formula  $P = MV$ , where M is Mass and V is Velocity, 'P' signifies  
A. Pressure    B. Power    C. Momentum    D. Potential
4. Which of the following statement is true  
A. Energy is a conserved quantity of Physics  
B. Mass is not a conserved quantity of Physics  
C. Both Energy and Mass are not conserved quantities of Physics  
D. Mass is not at all equivalent to Energy by any relation
5. In which of the following way, a vector is different from a scalar  
A. Having Unit    B. Having Direction    C. Having Magnitude    D. Having Direction and Unit
6. 'Moving particles have wave characteristics' was the idea first proposed by  
A. Newton    B. de Broglie    C. Somerfield    D. Max Born
7. Any motion that repeats itself at regular intervals of time is called  
A. Periodic motion    B. Linear motion    C. Vibration    D. Noise
8. Force per unit area and Force per unit time are the definitions of  
A. Pressure and Impulse    B. Impulse and Pressure    C. Power and Pressure    D. Pressure and work
9. Gaps are left between rail on a railway track because of  
A. Easy monitoring of rails    B. Thermal expansion of rails    C. Noise reduction    D. Easy installation
10. Launching a rocket relies on  
A. Newton's First Law of Motion    B. Newton's Second Law of Motion  
C. Newton's Third Law of Motion    D. All of the above
11. The phenomenon of change in frequency of a wave in relation to an observer who is moving relative to wave source is called

A. Echo B. Doppler Effect C. Acoustics D. Dispersion

12. 'Rainbow' is due to

A. Dispersion of White Light B. Interference of White Light

C. Polarization of White Light D. Reflection of White Light

13. How do concave mirrors reflect light?

A. They spread light out B. They absorb light

C. They allow light to pass through without reflection D. They converge light towards a focal point

14. Which of the following is true about total internal reflection?

A. It happens when light enters a medium with same optical density

B. It happens when light travels from less dense to more dense medium

C. It happens when light travels from more dense to less dense medium

D. It results in the reflection of light

15. In what scenario are waves considered to interfere coherently?

A. When they have different speeds B. When they have same amplitude

C. When they have Same frequencies D. When they have different wavelengths

16. What is the principle that states 'Each point on a wave front acts as a point source of spherical waves'?

A. Newton's law B. Huygens's Principle C. Bernoulli's Principle D. Snell's Law

17. In an open circuit, terminal voltage of a cell or battery is known as

A. Total Voltage B. Potential Difference C. emf (Electro Motive Force) D. Internal resistance

18. What does an electric field line represent?

A. Path that a positive test charge would flow B. Motion of negative charge

C. Electric current flow D. None of the above

19. Which energy is stored in a capacitor?

A. Magnetic Energy B. Kinetic Energy C. Electrical Energy D. Thermal Energy

20. Relative permittivity of air is

A. 1 B. Zero C. Infinity D. 0.5

### Section-B ( True or False)

17. The frequency of a wave is the number of wavelengths that pass a point per second [ ]

18. Work is done when a force is applied to an object and the object moves. [ ]

19. Using a longer wrench makes it easier to loosen a tight bolt because it increases torque [ ]

20. The acceleration due to gravity on Earth is approximately  $9.8 \text{ m/s}^2$ . [ ]

21. Light travels faster in water than in a vacuum [ ]

22. Sound travels faster in air than in water [ ]
23. The angle of incidence of light is always equal to the angle of reflection [ ]
24. A resistor in a circuit increases the current flowing through the circuit. [ ]
29. An ammeter measures the voltage drop across a resistor [ ]
30. Opening a refrigerator door cools the entire room. [ ]

**Section-C (Matching)**

- |                     |     |               |
|---------------------|-----|---------------|
| 1. Force            | ( ) | a. Watt (W)   |
| 2. Power            | ( ) | b. Joule (J)  |
| 3. Temperature      | ( ) | c. Newton (N) |
| 4. Electric Current | ( ) | d. Ampere (A) |
| 5. Energy           | ( ) | e. Kelvin (K) |

**Section-D (Fill in the blanks)**

Write full forms of the following physics terminology

1. EMF :
2. UV light :
3. AC and DC :
4. LED :
5. GPS :

**Section-E (Letter grid)**

Find and circle **10** hidden physics terms (horizontally, vertically, or diagonally) in the following grid

F L I G H T A W E

E N E R G Y S N O

M A S S P C U A R

C H A R G E R M E

U I R U A V E V L

V O L T A G E A G

R O W A V E G N M

A M A G N E T P F

G E C U R R E N T