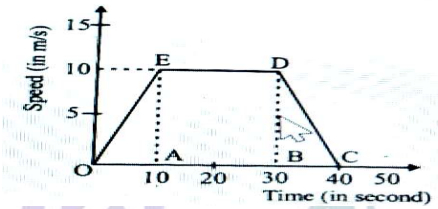
NEW STANDARD ACADEMY

Exam NEET - JEE **Marks: 60**
Date : 03-07-23 **CLASS : 9TH** **Time: 90:MIN**

PHYSICS

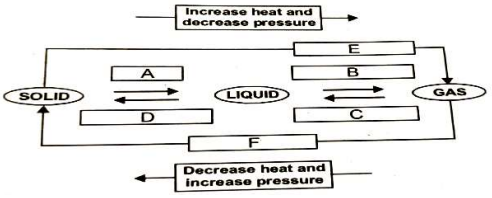
1. Distinguish between speed and velocity.
2. A car travels a certain distance with a speed of 50 kmh-1 and returns with a speed of 40 kmh-1. Calculate average speed for the entire journey.
3. Figure shows the speed time graph of a particle. Find the distance travelled in the time interval 0 to 40s.



4. Define momentum and state its SI unit. State the principle of conservation of momentum.
5. State Nuwton`s Third Law of motion.
6. A body of mass 3 kg is moving with a velocity of $2ms^{-1}$ Now a force is applied on the body so that its velocity changes to $3.5ms^{-1}$ in 25 s. Calculate the direction and magnitude of the force acting on the body.
7. What is the momentum of an object of mass m, moving with velocity v?
   a. $(mv)^2$ b. mv^2 c. $1/3\ mv^2$

CHEMISTRY

8. Give Reasons:
   a. A gas fills completely the vessel in which it is kept.
   b. A gas exerts pressure on the walls of the container.
   c. A wooden table should be called a solid.
   d. We can easily move our hand in air, but to do the same through a solid block of wood, we need a karate expert.
9. Name A,B,C,D,E and F in the following diagram showing change in its state.



10. A. Explain why temperature remains constant during interconversion of states of matter.
    B. "sublimation does not require heating." Is this statement true ? Justify your answer.
11. A. List out three difference between evaporation and boiling.
    B. Why perspiration keeps our body cool?
12. Convert the following temperatures to Kelvin scale.
    a. 25^0 C b. 373^0 C
13. What is the physical state of water at ?
    a. 25^0 C b. 0^0 C c. 100^0 C

BIOLOGY

14. How do substances like CO_2 and water move in and out of cell
15. Where are chromosomes present in the cell what is there chemical composition.
    b How many chromosomes are present in human
16. discuss the role of
    a. presence of deeply folded membrane in mitochondria
    b. digestive enzyme in lysosome
17. Define the following terms
    a. Diffusion b- endocytosis c-osmosis
    b. exocytosis
18. Name the following-
    a. Tissue that occurs in specific reason of growth
    b. Tissue present at the growing tips of the stems and roots
    c. Tissue at the base of the leaves are internode on twigs
    d. basic packing tissue in the form of a few layers of cell
19. Write two location of the following animal tissue
    1 simple squamous epithelial tissue
    2 cupbodial epithelium
20. Write four characteristic feature of parenchyma tissue.

MATHS

21. If x = $\frac{a-b}{a+b}$, $y = \frac{b-c}{b+c}$,z=$\frac{c-a}{c+a}$, then the value of $\frac{(1+x)(1+Y)(1+z)}{(1-x)(1-y)(1-z)}$ is _____.

22. Find the remainder when the expression $3x^3+8x^2-6x+1$ is divided by x+3.

23. If (x+3,5)=(2,2-y) then the values of the x and y respectively are _____

24. The coordinates of two points are A (3,4) and B (-2,5), then (abscissa of A)_____(abscissa of B is _____.

25. The area of the triangle formed by the points P(0,1),Q(0,5) and R(3,4) is _____.

26. The equation of the line whose graph passes through the origin is _____.

27. The cost of a note book is twice the cost of a pen, If the cost of a note book is Rs. X and that of a pen is Rs. Y, then a linear equation in two variables to represent the given condition is _____.

28. If $x=2-\sqrt{3}$ then the value of $x^2 + \frac{1}{x^2}$ and $x^2 - \frac{1}{x^2}$ respectively, are _____

29. The number x=1242424…. Can be expressed in the form x =$\frac{P}{q}$, where p and qq are positive integers having no common factors. Then p + q equals _____.

30. If(2,0) is a solution of the linear equation 2x+ 3y=k, then the value of k is _____.

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