

## **PHYSICS**

# **BOOKS - FULL MARKS PHYSICS (TAMIL ENGLISH)**

### **SAMPLE PAPER - 3**

Part I

1. One kilogram force equals to

A. 9.8 dyne

 $\mathsf{B.}\,9.8 imes 10^4~\mathsf{N}$ 

C.  $98 \times 10^4$  dyne

D. 980 dyne

# Answer:



**2.** Temperature is the average ...... of the molecules of a substance.

A. difference in K.E and P.E

B. sum of P.E and K.E

C. difference in T.E and P.E

D. difference in K.E and T.E

#### **Answer:**



3. In nuclear reactor is used as a control rod.		
A. barium		
B. carbon		
C. cadmium		
D. Na		
Answer:		
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4. Mass of 1 mole of Nitrogen atom is		
A. 28 amu		
A. 28 amu B. 14 amu		

D.	14	g

#### **Answer:**



**5.** Which of the following have inert gases 2 electrons in the outermost shell?

A. He

B. Ne

C. Ar

D. Kr

#### **Answer:**



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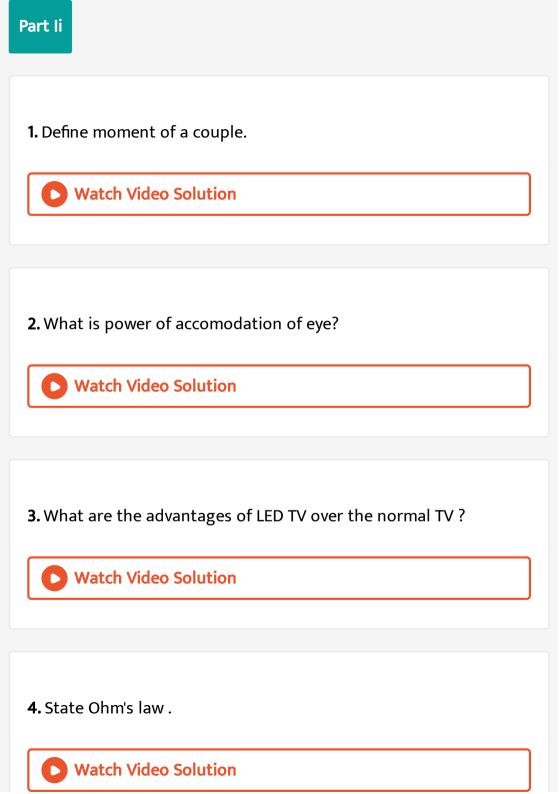
<b>6.</b> The number of components in a binary solution is
A. 2
B. 3
C. 4
D. 5
Answer:
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7. Coronary heart disease is due to
A. Streptococci bacteria
B. Inflammation of pericardium

C. Weaking of heart valves

nswer:
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. Glycolysis takes place in the mitochondria.
A. Cytoplasm
B. Mitochondira
C. Inner mitochondiral membrane
D. Nucleus
nswer:
Watch Video Solution

D. Insufficient blood supply to heart muscles

D. Gregor Mendel	
Answer:	
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<b>11.</b> Which is used to edit programs?	
A. Inkscape	
B. Script editor	
C. Stage	
D. Sprite	
Answer:	
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5. Distinguish between saturated and unsaturated fatty acids.  Watch Video Solution
<b>6.</b> Why is the teeth of rabbit called heterodont?
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7. What is the function of Oxytocin?
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8. What will happen I you cut planaria into small fragments?
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# 9. Match the following:

- (a) Atavism (i) A wing of a bat an A a wing of an insect
- (b) Atavism(ii) Rudimentary tail(c) Homologous organs(iii) Vermiform appendix
- (d) Analogous organs (iv) a forelimb of cat and a bats wing

10. How much current will an electric heater coil draw from 220 V



source, if the resistance of heater coil is 110  $\Omega$ .



Part lii

1. What are the types of inertia? Give an example for each type.



2. Explain the rules for obtaining images formed by a convex lens with the help of ray diagram.



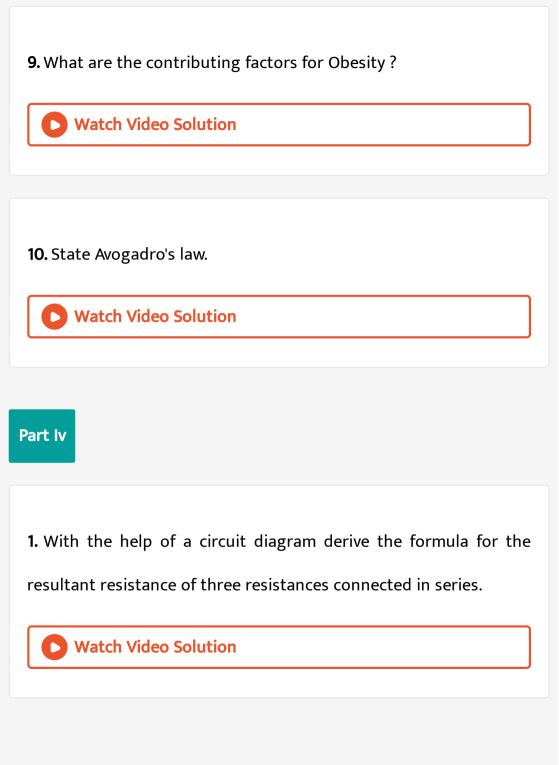
**3.** A piece of wire of resistance 10 ohm is drawn out so that its length is increased to three times its original length. Calculate the new resistance.



**4.** Write the characteristics of hydrocarbons .



5. (i) What is Hydrated salt?
(ii) How is ethanoic acid prepared from ethanol? Give the chemical
equation?
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<b>6.</b> Voluntary and involuntary actions.
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7. Enumerate any four functions of blood.
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8. Write the reaction for photosynthesis.
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2. An object of height 3 cm is placed at 10 cm from a concave lens of focal length 15 cm. find the size of the image.



- 3. (i) What is the mass of 1 mole of nitrogen atom?
- (ii) How many moles of  $SO_2$  have same mass as 3 moles of oxygen?
- (iii) How many molecules are present in 1 ml of water?



4. Explain the factors influcencing the rate of a reaction



**5.** Write the physiological effects of gibberellins.



**6.** Explain the importance of fossils.

