



# PHYSICS

## BOOKS - FULL MARKS PHYSICS (TAMIL ENGLISH)

### SAMPLE PAPER - 14

**Part I Choose The Most Suitable Answer Answer  
All The Questions**

**1. The unit of torque is**

A. Nm

B. Newton

C. Dyne

D. Kgf

**Answer: A**



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2. Power of lens is  $-0.5\text{ D}$ , then the focal length is.....

A. 4 m

B. 0.2 m

C.  $-2$  m

D.  $-0.25$  m

**Answer: C**



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**3. . . . .** Is used to indicate the direction  
of current.

A. Voltmeter

B. Ammeter

C. Galvanometer

D. Rheostat

**Answer: B**



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4. The Volume occupied by 1 mole of a diatomic gas at S.T.P is \_\_\_\_\_.

A. 11.2 litre

B. 5.5 litre

C. 22.4 litre

D. 44.8 litre

**Answer: C**



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5. \_\_\_\_\_group contains the members of halogen family .

A. 17<sup>th</sup>

B. 18<sup>th</sup>

C. 15<sup>th</sup>

D. 16<sup>th</sup>

**Answer: A**



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6. when pressure is increased at constant temperature the solubility of gases in liquid

\_\_\_\_\_.

A. no change

B. increases

C. decreases

D. no reaction

**Answer: B**



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7. Name the phenomenon by which carbohydrates are oxidized to release ethyl alcohol.

A. Krebs's cycle

B. anaerobic respiration

C. glycolysis

D. aerobic respiration

**Answer: D**



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**8.** The blood sucking habit of leech is known as

\_\_\_\_\_ .



A. Herbivorous

B. Predator

C. Sanguivorous

D. Cannibalism

**Answer: C**



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**9.** The force of attraction between molecules of water is called.....

A. cohesion

B. adhesion

C. capillary action

D. transpiration

**Answer: A**



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**10.** In man, there are \_\_\_\_\_ of cranial nerves.

A. 31

B. 13

C. 21

D. 12

**Answer: D**



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**11.** The \_\_\_\_\_ units form the backbone of the DNA.

A. 5 carbon sugar

B. sugar phosphate

C. nitrogenous base

D. phosphate

**Answer: B**



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**12.** What are the steps will you adopt for better waste management ?

A. reduce the amount of waste formed

B. reuse the waste

C. recycle the waste

D. all of the above

**Answer: D**



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## Part II Answer Any Seven Questions

1. Define dispersion of light.



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2. Differentiate mass and weight.



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3. What is meant by Rayleigh scattering.



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4. Calculate the number of water molecules present in one drop of water which weights

0.18 g.



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5. Mention the uses of copper.



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6. Name is five layers of body wall of leech.



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7. What is the function of oxytocin?



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8. Which among the following is/are solid aerosol?

(i) Dust (ii) Fog (iii) Aerosol spray (iv) Air



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9. State the Biogenetic law.



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10. Calculate the pH of sodium hydroxide solution having the concentration of  $OH^- 0.01\text{mol}^{-1}$ .



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## Part Iii Answer Any Seven Questions

1. Deduce the equation of a force using Newton's second law of motion.



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2. Explain the construction and working of a 'Compound Microscope'.



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3. Explain superficial expansion with equation.



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4. Give the salient features of " Modern atomic theory ".



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5. Methods of preventing corrosion



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6. The sex of the new born child is a matter of chance and neither of the parents may be

considered responsible for it. What would be the possible fusion of gametes to determine the sex of the child?



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7. Describe the structure of chloroplast.



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8. (i) The ratio of masses of two planet is 2:3 and the ratio of their radii is 4:7. Find the ratio

of their accelerations due to gravity.

(ii) What are the advantages of LED TV over the normal TV?



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## Part Iv Answer All The Questions

1. Distinguish between ideal and non-ideal solution.



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2. (i) A torch bulb is rated at 3V and 600 mA.

Calculate,

(a) power (b) resistance (c ) energy consumed

if it is used for 4 hours.

(ii) Calculate the mass of a body weighing 100

dyne.  $g = 10m / s^2$ .



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3. Derive the relationship between relative molecular mass and Vapour density.



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4. (i) Explain smelting process.

(ii) Calculate the number of moles of  $CO_2$

(iii) Find the mass of 2.5 mole of oxygen atom.



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5. How does rainwater harvesting structures recharge ground water?



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**6. Explain the structure and function of tRNA?**



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