



PHYSICS

BOOKS - FULL MARKS PHYSICS (TAMIL ENGLISH)

SAMPLE PAPER - 10

Part I

1. Newton's III law is applicable _____.

A. for a body is at rest

B. for a body in motion

C. both a and b

D. only for bodies with equal masses.

Answer: C



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2. SI unit of resistance is

A. mho

B. joule

C. Ohm

D. Ohm meter

Answer: C



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3. Which of the following is the heaviest one ?

A. Hydrogen

B. Alpha

C. Beta

D. Gamma

Answer: B



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4. 1 mole of any substance contains ___ molecules.

A. 6.023×10^{23}

B. 6.023×10^{-23}

C. 3.00115×10^{23}

D. 12.046×10^{23}

Answer: A



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5. In the aluminothermic process, the role of

Al is _____

A. Oxidizing agent

B. reducing agent

C. hydrogenation agent

D. Sulphurising agent

Answer: B



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6. solubility is the amount of solute dissolved
in _____ g of solvent .

A. 10 g

B. 50 g

C. 100 g

D. 1 g

Answer: C



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7. The decreased heart beat is called.....

A. SA node

B. Purkinjee fibres

C. AV node

D. Bundle of His

Answer: A



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8. Metastasis is associated with

A. Benign tumour

B. Malignant tumour

C. Both (a) and (b)

D. Crown gall tumour

Answer: B



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9. Kreb's cycle takes place in

A. Chloroplast

B. Stomata

C. Inner mitochondrial

D. Mitochondrial matrix

Answer: D



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10. The endarch condition is the characteristic feature of

A. root

B. stem

C. leaves

D. flowers

Answer: B



11. Autecology deals with the study of

A. fossils

B. genes

C. petroleum

D. homologous organ

Answer: A



12. Which software is used to create animation?

A. Paint

B. PDF

C. MS word

D. Scratch

Answer: D



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1. State the principle of moments .



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2. Why does sky appear blue?



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3. What is the audible range of frequency?





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4. calculate the number of moles. 27.95 g of iron



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5. what is irreversible reactions?



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6. Distinguish between Oviparous and Viviparous animals .



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7. Bring out any two physiological activities of abscisic acid (ABA).



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8. (a) List the difference between RBC and WBC.

(b) Define triple fusion.



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9. Why is Archaeopteryx considered to be a connecting link?



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10. Calculate the resistance of a conductor through which a current of 5A passes , when the potential difference between its ends is 60V.



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Part Iii

1. State the universal law of gravitation and derive its Mathematical expression.



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2. (i) List any five properties of light

(ii) State Rayleigh' law of scattering.



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

Calculate it's (a) power (b) resistance

(c) energy consumed if it used for 4 hours.

(ii) Why does sound travel faster on a rainy day than on a dry day ?



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



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5. In Hall's process of electrolytic reduction of alumina . Name the Cathode .



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6. What are the structures involved in the protection of brain?



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7. What is the importance of valves in the heart ?



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8. Differentiate the following

BOD and COD



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9. What is metastasis ?



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10. (i) Explain Soddy and Fajan Radioactive displacement law.

(ii) Calculate the pH of $0.05M H_2SO_4$.



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11. State and derive the perfect or ideal gas equation.



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12. (i) A man is standing between two vertical walls 680 m apart . He claps his hands and hears two distinct echoes after 0.9 second and

1.1 second respectively. What is the speed of sound in the air?

(ii) A door is pushed , at a point whose distance from the hinges is 90 cm , with a force of 40 N. Calculate the moment of the force about the hiages.



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13. (i) Calculate the mass of 2.5 mole of oxygen atom.

(ii) Calculate the number of molecules in 11g of CO_2 .



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14. How is ethanol manufactured from sugarcane ?



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15. (i) Which hormone requires iodine for its formation ? What will happen if intake of

iodine in our diet is low ?

(ii) What is the importance of raivater harvesting ?

(iii) What is colosturm ? How is milk production hormonally regulated ?



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16. How does locomotion take place in leech?



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