



PHYSICS

BOOKS - FULL MARKS PHYSICS (TAMIL ENGLISH)

SAMPLE PAPER - 2

Part I

1. Impulse is equal to _____

A. rate of change of momentum

B. rate of force and time

C. change of momentum

D. rate of change of mass

Answer:



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2. The value of universal gas constant is _____ .

A. $3.81 \text{ mol}^{-1} \text{ KJ}^{-1}$

B. $8.03 \text{ J mol}^{-1} \text{ K}^{-1}$

C. $1.38 \text{ mol}^{-1} \text{ K J}^{-1}$

D. $8.31 \text{ J mol}^{-1} \text{ K}^{-1}$

Answer:



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3. Safe limit of receiving the radiation is about

.....

A. 1 R

B. 0.1 R

C. 100 R

D. 10 R

Answer:



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4. The gram molecular mass of oxygen molecules is _____/

A. 16 g

B. 18 g

C. 32 g

D. 17 g

Answer:



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5. The basis of modern periodic law is _____

A. atomic number

B. atomic mass

C. Isotopic mass

D. number of neutrons

Answer:



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6. A solution is a _____ mixture .

A. homogeneous

B. heterogeneous

C. homogeneous and heterogeneous

D. non-homogeneous

Answer:



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7. Which is the sequence of correct blood flow

A. ventricle - atrium - vein - arteries

B. atrium - ventricle - veins - arteries

C. atrium - ventricle - vein - arteries

D. ventricles - vein - atrium - arteries

Answer:



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8. Polyphagia is a condition seen in

A. Diabetes insipidus

B. Diabetes mellitus

C. Obesity

D. AIDS

Answer:



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9. The xylem and phloem arranged side by side on same radius is called _____ .

A. radial

B. amphivasal

C. conjoint

D. None of these

Answer:



10. Which is formed during anaerobic respiration

A. Carbohydrate

B. Ethyl alcohol

C. Acetyl CoA

D. Pyruvate

Answer:



11. Which is used to build scripts ?

A. Script area

B. Block palette

C. stage

D. sprite

Answer:



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12. Rice normally grows well in alluvial soil, but _____ is a rice variety produced by mutation breeding that grows well in saline soil

A. Atlas 66

B. Triticale

C. Protina

D. Atomita - 2 - rice

Answer:



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1. Why a spanner with a long handle is preferred to tighten screws in heavy vehicles ?



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2. State Snell's law.



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3. What is co-efficient of cubical expansion?



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4. Define relative atomic mass.



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5. What is aqueous and non - aqueous solution ?



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6. How is diastema formed in rabbit?



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7. What is the role of parathorone?



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8. A student does the experiment on tracing the path of a ray of light passing through a

rectangular glass slab for different angles of incidence. He can get a correct measure of the angle of incidence and the angle of emergence by following



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9. Write any two importance of Ethnobotany.



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10. The focal length of the concave lens is 7 m.

Calculate the power of lens.



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Part iii

1. Give the applications of universal law gravitation .



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2. Differentiate convex lens and concave lens.



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3. Three resistors of resistance 5 ohm, 3 ohm and 2 ohm are connected in series with 10 V battery. Calculate their effective resistance and the current flowing through the circuit.



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4. State Avogadro's law.



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5. Explain the types of double displacement reactions with examples.



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6. (i) Explain the structure of an atom bomb.



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7. Explain the structure of a neuron.



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8. Name three improved characteristics of wheat that helped India to achieve high productivity.



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9. Kavitha gave birth to a female baby. Her family members say that she can give birth to only female babies because of her family history. Is the statement given by her family members true? Justify your answer.



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10. Describe and name three stages of cellular respiration that aerobic organisms use to obtain energy from glucose.





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Part Iv

1. State newton's third law



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2. 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.



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3. (i) Calculate the mass of 6.023×10^{20} molecules of H_2O .

(ii) Calculate the moles of 12g of magnesium.

(iii) Calculate the number of molecules present in 50 g of Fe.



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4. Explain smelting process.



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5. How will you prevent soil erosion?



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6. How do you differentiate homologous organs from analogous organs?



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