



PHYSICS

BOOKS - FULL MARKS PHYSICS (TAMIL ENGLISH)

SAMPLE PAPER-13

Part I

1. The mass of a body is measured on planet Earth as M kg. When it is taken to a planet of

radius half that of the Earth then its value will be _____ kg.

A. $4M$

B. $2M$

C. $M/4$

D. M

Answer: C



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2. Amount of light entering into the eye is controlled by _____.

A. pupil

B. iris

C. cornea

D. ciliary muscles

Answer: B



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3. The moderator used in nuclear reacton is _____.

A. Cadmium

B. Boron Carbide

C. Heavy wate

D. Uranium (${}_{92}\text{U}^{235}$)

Answer: D



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

A. 16 g

B. 10 g

C. 32g

D. 17 g

Answer: C



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5. The number of periods and groups in the periodic table are.....

A. 6,16

B. 7,17

C. 8,18

D. 7,18

Answer: D



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6. Identify the non - aqueous solution.

A. sodium chloride in water

B. glucose in water

C. copper sulphate in water

D. sulphur in carbon-di-sulphide

Answer: D



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7. Glycolysis takes place in.....

A. cytoplasm

B. mitochondria

C. oxysomes

D. ribosomes

Answer: A



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8. The body of leech has

A. 23 segments

B. 33 segments

C. 38 segments

D. 40 segments

Answer: B



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9. Water enters the plant through stomata .

A. respiration

B. photosynthesis

C. excretion

D. transpiration

Answer: D



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10. is the longest cell in the body.

A. Axon

B. Nephron

C. Neuron

D. None of the above

Answer: C



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11. A single highly coiled tube where sperms are stored , get concentrated and mature is known as _____.

- A. Epididymis
- B. Vasa efferentia
- C. Vasa deferens
- D. Seminiferous tubules

Answer: A



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12. The loss of one more chromosome in a ploidy is called_____.

A. tetraploidy

B. Aneuploidy

C. Euploidy

D. Polyploidy

Answer: B



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1. State Newton's second law .



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2. Differentiate convex lens and concave lens.



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3. What is co-efficient of cubical expansion?





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4. Define atomicity .



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5. The aquatic animals live more in cold region

Why ?



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6. If the atomic mass of sodium is 23, then the number of moles 46 g of sodium is



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7. calculate the number of moles present in 9 g of ethane.



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8. Define reflex arc.



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9. Which hormone is secreted during emergency situation in man?



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10. Complete the following reaction.



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Part Iii

1. Describe rocket propulsion



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2. Why does sky appear blue?



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3. Explain the process of controlled and uncontrolled chain reactions.



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4. Along with cryolite and alumina, another substance is added to the electrolyte mixture. Name the substance and give one reason for the addition.



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5. Mention the uses of iron.



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6. Write the events involved in the sexual reproduction of a flowering plant .

Discuss the first event and write the types .



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7. What are lanthanides and actinides?





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



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9. Define Genetic engineering.



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10. A 20 g bullet moving at 300 m/s stops after penetrating 2 cm of bone. Calculate the average force exerted by the bullet .



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Part Iv

1. Explain the experiment of measuring the real and apparent expansion of a liquid with a neat diagram.



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2. What will be the mass of one ^{12}C atom in g?



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3. Write a short note on the following .

Pyrolysis



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