PHYSICS

BOOKS - FULL MARKS PHYSICS (TAMIL ENGLISH)

SAMPLE PAPER -15 (UNSOLVED)

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: C

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2. Magnification of a convex lens is

A. positive

B. negative

C. either positive or negative

D. zero

Answer: B

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3. Kelvin scale has zero reading at temperature....

A. $0^\circ C$

B. $-100°C$

C. $-273°C$

D. $-212°C$

Answer: C

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4. Which of the following is a triatomic

molcule ?

A. Glucose

B. Helium

C. Hydrogen

D. Carbon dioxide

Answer: D

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5. .... is the longest period in the periodic table.

A. Seventh period,

B. Sixth period

C. First period

D. Third period

Answer: B

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6. Powdered $CaCO_3$ reacts more rapidly than flaky $CaCO_3$ because of ....

A. large surface area

B. high pressure

C. high concentration

D. high temperature

Answer: A

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7. .... are the colourless plastids.

A. chloroplast

B. chromoplast

C. leucoplast

D. haemoglobin

Answer: C

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8. .... promotes the production of male flowers in Cucurbits.

A. Auxin

B. Gibberllins

C. Cytokinins

D. Abscisic acid

Answer: B

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9. The part of the human brain which acts as relay centre is ....

A. thalamus

B. hypothalamus

C. pons

D. corpus callosum

Answer: A

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10. The normal human heart beat is about .... time per minute.

A. 72-75

B. 70-90

C. 50-99

D. 80-120

Answer: A

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11. In leech, clitellum is present to ....

A. excrete waste

B. produce cocoon

C. produce gametes

D. digest food materials

Answer: B

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12. Which software is used to create animation?

A. Paint

B. PDF

C. MS word

D. Scratch

Answer: D

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1. How does an astronaut float in a space shuttle ?

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2. What is refractive index ?

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3. Distinguish between linear and cubical expansion.

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4. What are ores?

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5. Why does the reaction rate of a reaction increase on raising the temperature ?

6. Write the functions of epiglottis.

7. Minerals in the plants are not lost when the leaf falls .

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8. What is fossilization?

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9. Match the following.

(a) Sonalika	$-$	(i) Sugarcane
(b) IR8	$-$	(ii) Groundnut
(c) Saccharum	$-$	(iii) Semi-dwarf wheat
(iv) TMV-2	$-$	(d) Semi-dwarf Rice

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10. Calculate the resistance of a conductor through which a current of 2A passes, when the potential difference between its ends is 30V.

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

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2. Write the uses of telescopes.

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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.

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4. what is Saturated solution

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5. (i) What are the advantages of detergents over soaps?

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6. what are biological significance of DNA.

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7. What is double circulation?

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8. what are biological significance of DNA.

9. Describe and experiment which demonstrates that growth stimulating hormone is produced at the tip of coleoptile.

10. At $10°C$, how for away is a reflecting surface if you hear an echo in 0.274s? (speed of sound in air at $0°C$ is $331.3ms^{-1}$).

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Part Iv

1. (i) Two bodies have a mass ratio of 3:4 The force applied on the bigger mass produces an acceleration of $12ms^{-2}$. What could be the

acceleration of the other body, if the same force acts on it.

(ii) A cricket ball of mass 100 g moving with a speed of $20ms^{-1}$ is brought to rest by a player . Find the change in momentum of ball.

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2. Calculate the number of moles in 27g of Al.

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