



PHYSICS

BOOKS - SURA PHYSICS (TAMIL ENGLISH)

MODEL QUESTION PAPER HIGHER LEVEL

Mcq S

1. In which of the following sport the turning effect of force used ?

A. swimming tennis

B. cycling

C. hockey

D.

Answer:



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2. The value of universal gas constant

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

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

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

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

Answer:



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3. The frequency, which is audible to the human ear is

- A. 50 kHz
- B. 20 kHz
- C. 15000 kHz
- D. 10000 kHz

Answer:



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4. Which of the following is a triatomic molecule ?

A. Glucose

B. Helium

C. Carbon dioxide

D. hydrogen

Answer:



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5. A solution is a _____ mixture .

A. homogenous

B. heterogenous

C. homogenous and heterogeneous

D. non homogeneous

Answer:



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6. Which of the following are used as anaesthetics ?

A. Carboxylic acids

B. Ethers

C. Esters

D. Aldehydes

Answer:



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7. The body of leech has

A. 23 segments

B. 33 segments

C. 38 segments

D. 30 segments

Answer:



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8. Node of ranvier is found in_____

A. muscles

B. axons

C. dendrites

D. cyton

Answer:



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9. Estrogen is secreted by _____.

A. Anterior pituitary

B. Primary follicle

C. Graafian follicle

D. Corpus luteum

Answer:



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10. The 'use and disuse theory' was proposed by_____.

A. Charles Darwin

B. Ernst Haeckel

C. Jeann Baptiste Lamarck

D. Gregor Mendel

Answer:



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11. World 'No Tobacco Day ' is observed on

A. 43982

B. 43988

C. 43943

D. 44106

Answer:



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12. Which is used to build scripts ?

A. Scripts area

B. Block palette

C. Stage

D. Sprite

Answer:



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13. The eye defect's 'presbyopia' can be corrected by

A. convex lens

B. concave lens

C. convex mirror

D. Bi focal lenses

Answer:



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14. SI unit of resistance is

A. mho

B. joule

C. ohm

D. ohm meter

Answer:



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15. Artificial radioactivity was discovered by_____

- A. becquerel
- B. Irene Curie
- C. Roentgen
- D. Neils Bohr

Answer:



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16. _____ is an important metal to form amalgam

A. Ag

B. Hg

C. Mg

D. Al

Answer:



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17. Photolysis is a decomposition reaction caused by_____

A. heat

B. electricity

C. light

D. mechanical energy

Answer:



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18. Kreb's cycle takes place in

A. chloroplast

B. mitochondrial matrix

C. stomata

D. inner mitochondrial membrane energy

Answer:



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19. The wall of human heart is made of

- A. Endocardium
- B. Epicardium
- C. Myocardium
- D. all of the above

Answer:



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20. Avena coleoptile test was conducted by

A. Darwin

B. N. Smit

C. Paal

D. F.W. Went

Answer:



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21. The centromere is found at the centre of the _____ chromosome.

- A. Telocentric
- B. Metacentric
- C. Sub-metacentric
- D. Acrocentric

Answer:



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22. We can cut the DNA with the help of

A. scissors

B. restriction endonucleases

C. knife

D. RNAase

Answer:



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23. A renewable source of energy is

A. petroleum

B. coal

C. nuclear fuel

D. trees

Answer:



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24. Cancer of the epithelial cells is called

A. Leukemia

B. Sarcoma

C. Carcinoma

D. Lipoma

Answer:



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25. Define inertia. Give its classification.



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26. What is vo-efficient or real expansion ?



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27. What are longitudinal waves? Give one example.



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28. Define critical mass.



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29. Define combination reaction. Give one example for an exothermic combination reaction.



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30. How does leech suck blood from the host?



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31. Define stimulus.



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32. What are Okazaki fragments?



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33. What are psychotropic drugs ?



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34. Find the percentage of nitrogen in ammonia



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



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36. (i) What is rust? Give the equation for formation of rust.

(ii) State two conditions necessary for rusting of iron.



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37. (i) Draw and label the structure of oxysomes.

(ii) What is respiratory quotient?



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38. Voluntary and involuntary actions.



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39. How does fossilization occurs in plants?



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40. What precautions can be taken for preventing heart disease?





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41. How will you prevent soil erosion?



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42. Medullated and non-medullated nerve fibre.



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43. What are the causes of Myopia?



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



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45. Write notes on various factors affecting solubility .



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46. How is the structure of DNA organized?

What is the biological significance of DNA?



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47. How do you differentiate homologous

organs from analogous organs?



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Subjective Questions

1. State Newton's second law .



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2. Define the unit of current.



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3. Define atomicity .





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4. Name the simplest ketone and give its structural formula.



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5. Define Volume percentage .



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6. What is cohesion?



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7. What are Synthetic Auxins? Give examples.



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



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9. Name the types of stem cells.



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10. Calculate the coefficient of cubical expansion of a zinc bar whose volume is increased $0.25m^3$ from $0.3m^3$ due to change in its temperature of 50K.



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11. (a) What is stage?

(b) What are the agents of soil erosion?



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12. (a) What is Molarr volume of gas?

(b) Define: Relative atomic mass.



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13. (a) Define Hydrated salt.

(b) Define the term: solution.



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14. Write a short note on mesophyll.



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15. What causes the opening and closing of guard cells of stomata during transpiration?



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16. What is colostrum? How is milk production hormonally regulated?



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



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



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19. What is Sprite?



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20. Calculate the % of each element in calcium carbonate. (Atomic mass: C-12, O-16, Ca-40)



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21. What are the factors that effect the speed of sound in gases?



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22. What connection is used in domestic appliances and why?



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23. (a) Distinguish between ideal gas and real gas.

(b) What is co-efficient of real expansion?



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24. Explain smelting process.



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25. (i) What are allosomes?

(ii) Explain the structure of a chromosome.



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