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ARIGNAR ANNA HR SEC SCHOOL –SENDURAI

MODEL FULL PORTION EXAM-2020

STD: 10

MARK: 75

TIME:2.30 Hrs

EXAM NO:

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SECTION-A

I CHOOSE THE BEST ANSWER

(12 × 1 =12)

1. One kilogram force equal to
a) 9.8 dyne b) $9.8 \times 10^4 \text{N}$ c) 98×10^4 d) 980 dyne
2. Power of a lens is -4D, then its focal length is
a) 4m b) -40m c) -0.25m d) -2.5m
3. Kilowatt hour is the unit of
a) Resistivity b) Conductivity c) Electrical energy d) Electrical power
4. _____ aprons are used to protect us from gamma radiation
a) Lead oxide b) Iron c) Zinc d) Aluminium
5. Isotones have equal number of
a) Proton b) Electron c) Neutron d) Positron
6. Modern periodic law is based on _____
a) Atomic mass b) Atomic number c) Number of neutron d) Both(a) and (b)
7. 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
8. The organic compound contains 2 carbon atoms , the root word according IUPAC is
a) Meth- b) Eth- c) Prop – d) But –
9. Casparian strips are present in the -----
a) Cortex b) Pith c) Pericycle d) Endodermis
10. The body of leech has
a) 23 segments b) 33 segments c) 38 segments d) 30 segments
11. Who is called “ Father of green Revolution”?
a) Dr M.S.Swaminathan b) Dr. Normal E.Borlong c) Both of them d) None of them
12. Which is used to build scripts?
a) Script area b) Block palette c) Stage d) Sprite

SECTION-B

II Answer any seven question only (Q.NO.22 compulsory)

(7 × 2 = 14)

13. Why are traffic signals red in colour?
14. State Rayleigh's law of scattering .
15. Why is tungsten metal used in bulbs , but not in fuse wires?
16. What is Molar volume of a gas?
17. Answer the following question using the data given below:

Assertion: the nature of bond in HF molecule is ionic .

Reason : The electro negativity difference between H and F is a 1.9.

(i) A and R are the correct ,R explain the A

(ii) A is correct , R is wrong .

(iii) A is wrong , R is correct.

(iv) A and R are correct , R doesn't explain A.

18. What is cardiac cycle?
19. Difference between voluntary and involuntary actions.
20. What are chemical messengers?
21. What is Scratch?
22. What will be the frequency of sound having 0.20 m as its wavelength, when it travels with a speed of 331ms^{-1} ?

SECTION-C

(7 × 4 = 28)

III) Answer any seven question (compulsory Q.No.32)

23. Differentiate mass and weight
24. State law of refraction
25. a)What are the merits of LED Tv over the normal Tv?
b) List the merits of LED bulb.
26. Compare the properties of alpha and Beta radiation.
27. What is isotopes and isobars. give each one example.
28. Difference between atom and molecule.
29. Differentiate between dicot and monocot stem.
30. With a neat a labelled diagram describe the parts of typical angio spermic ovaule.

31. Discuss the importance of biotechnology in the field of medicine.

32. An object of height 3 cm is placed at 10 cm from a concave lens of focal length 15 cm. Find the size of the image.

SECTION-D

IV ANSWER ALL THE QUESTIONS

(3 × 7 = 21)

33.a) i) State Newton's second law.

ii) State and prove the law of conservation of linear momentum.

(OR)

b) i) List any five properties of light.

ii) Derive the ideal gas equation.

34. a) i) Define mole.

ii) How many grams are there in

a) 3 moles of HCl

b) 2 moles of H₂O

c) 4 moles of glucose.

iii) Find the percentage of Nitrogen in ammonia.

(OR)

b) i) What are the methods preventing corrosion?

ii) Write any three uses of copper.

35. a) i) What are Okazaki fragments?

ii) How is the structure of DNA organised? What is the biological significance of DNA?

(OR)

b) i) Describe and name three stages of cellular respiration that an aerobic organism uses to obtain energy from glucose

Prepared by **ALEXANDER S MSc., M.Phil., B.Ed.,**
BT SCIENCE TEACHER,
ARIGNAR ANNA HIGHER SEC SCHOOL, SENDURAI-621710.
Email : alexchemist88@gmail.com
Cell: 8807524714

