Class :10

Register Number 1 0 0 1 4 0

SECOND REVISION EXAMINATION, FEBRUARY - 2023

Time Allowed : 3.00 Hours] SCIENCE [Max. Marks : 75

PART – I

Note : (i) Answer all the questions 12x1=12

(ii) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer

1. A convex lens forms a real, diminished point sized image at focus. Then the position of the object is at
   a) focus b) infinity c) at 2 f d) between f and 2f
2. Temperature is the average _____ of the molecules of a substance
   a) difference K.E and P.E b) sum of P.E and K.E
   c) difference in T.E and P.E. d) difference in K.E and T.E
3. The potential difference required to pass a current 0.2 A in a wire of resistance 20 ohm is _____
   a) 100 V b) 4 V c) 0.1 V d) 40 V
4. Man-made radioactivity is also known as _____
   a) Induced radioactivity b) spontaneous radioactivity
   c) artificial radioactivity d) a & c
5. Which of the following is a triatomic molecule?
   a) Glucose b) helium c) carbon di oxide d) Hydrogen
6. Which of the following is the universal solvent?
   a) Acetone b) Benzene c) Water d) Alcohol
7. 'X' is a orange coloured compound. It turns to green when it reacts with alcohol. Hence it is used for identification of alcohols. 'X' is _____
   a) K_2Cr_2O7 b) $FeSO_4$ c) KOH d) NaOH
8. The concept of blood group is derived by _____
   a) Wiener b) Karl Lansteiner c) William Harvey d) His
9. Vomiting centre is located in
   a) medulla oblongata b) Stomach c) Cerebrum d) Hypothalamus
10. Syngamy results in the formation _____
    a) Zoospores b) Conidia c) Zygote d) Chlamydospores
11. Himgiri developed by hybridisation and selection for disease resistance against rust pathogens is a variety of _____
    a) Chilli b) maize c) sugarcane d) wheat
12. Global warming will cause
    a) A raise of level in oceans b) melting of glaciers
    c) Sinking of islands d) all of these

PART-II

Answer any seven questions. (Question No. 22 is compulsory) 7x2=14

13. While catching a cricket ball the fielder lowers his hands backwards. Why?
14. Why are traffic signals red in colour?
15. State Boyle's law
16. Mention two cases in which there is no Doppler effect in sound?
17. **True or False: (If false give the correct statement)**
    A) Sodium chloride dissolved in water forms a non-aqueous solution.
    B) Moseley's periodic table is based on atomic mass
18. Name the simplest ketone and give its structural formula.
19. **Assertion and Reasoning**
    a. Both A and R are true and R is correct explanation of A
    b. Both A and R are true but R is not the correct explanation of A
    c. A is true but R is false
    d. Both A and R are false

Assertion: RBC plays an important role in the transport of respiratory gases.

Reason: RBC do not have cell organelles and nucleus

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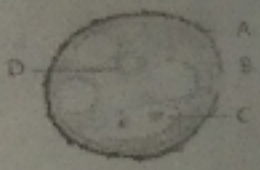
20. Identify the parts A, B, C and D



21. Define genetic engineering
22. Calculate the p^H of 1.0×10^{-4} molar solution of HNO_3

PART-3

7x4=28

Answer any seven questions. (Question No. 32 is compulsory)

23. Give the applications of universal law gravitation
24. a) State Joule's law of heating.
    b) An alloy of nickel and chromium is used as the heating element. Why?
25. a) State Soddy and Fajan's displacement law
    b) **Match:**

a. Fuel	-	lead
b. Moderator	-	heavy water
c. Control rods	-	cadmium rods
d. Shield	-	uranium

26. A is a reddish brown metal, which combines with O_2 at < 1370 K gives B, a black coloured compound. At a temperature > 1370 K, A gives C which is red in colour Find A, B and C with reaction
27. Differentiate soaps and detergents.
28. List out the parasitic adaptations in leech.
29. a) Write a short note on mesophyll.
    b) Identify whether the statements are True or False. Correct the false statement An anticoagulant present in saliva of leechis called heparin.
30. a) What is cohesion?
    b) Write the differences between endocrine and exocrine gland.
31. a) How does developing embryo gets itsnourishment inside the mother's body?
    b) Define Ethnobotany and write its importance
32. a) Once a person starts taking drugs or alcoholit is difficult to get rid of the habit. Why?
    b) List any three activities based on 4R approachto conserve natural resources

PART – IV

3x7=21

IV. Answer all the question: (One question from each section)

SECTION - A

33. a) i) State and prove the law of conservation of linear momentum.
    ii) Distinguish between linear, arial and superficial expansion.

(OR)

    b) i) What is a nuclear reactor? Explain its essential parts with their functions.
    ii) What is the role of the earth wire indomestic circuits?

SECTION - B

34. a) i) Derive the relationship between Relative molecular mass and Vapour density
    ii) The aquatic animals live more in cold region Why?

(OR)

    b) i) Explain the mechanism of cleansing action of soap.
    ii) Differentiate reversible and irreversible reactions.

SECTION - C

35. a) i) Enumerate the functions of blood.
    ii) Name the hormones which regulates waterand mineral metabolism in man.

(OR)

    b) i) Explain with an example the inheritance of di hybrid cross. How is it different from monohybrid cross?
    ii) Name two maize hybrids rich in amino acid lysine

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