

PABSON, Kathmandu
FIRST TERMINAL EXAM-2080

Science

Class: 10

Full Marks: 75

Time: 3 hrs.

Candidates are required to write their answers according to the instructions given.

Attempt all questions.

Group-A**Multiple Choice Questions:****[10×1 = 10]****1. Tick (✓) the correct alternative.**

- a) Which of the following is fundamental unit?
i) mol ii) Cd iii) N iv) K
- b) Which division of the plants have vascular system?
i) algae ii) Bryophyta iii) Spermatophyta
iv) Chordata
- c) The economic rearing of honey bee is called.....
i) horticulture ii) sericulture iii) Apiculture
iv) tissue culture
- d) The factors affecting upthrust are.....
i) Volume of liquid ii) density of the liquid
iii) Height of liquid column iv) All of above
- e) The SI unit of universal gravitational constant is
i) Nm/kg² ii) Nm²/kg² iii) Nkg²/m² iv) Nkg/m²
- f) The volume of water is minimum at
i) 0°C ii) 4°C iii) 100°C iv) 0K
- g) What is the value of H in $v = Hd$?
i) 73km/s Mpc ii) 73 m/s Mpc iii) 73 m/s pc iv) 100 inch
- h) Which vitamins are found in Aloe Vera?
i) A and B ii) A and C iii) B and C iv) E and K
- i) Which of the following is coinage metal?
i) Sodium ii) Magnesium iii) Silver iv) Chlorine
- j) What is x in the given chemical equation?

Date: 2080-03-25

10:00am



i) Na

ii) NaOH

iii) NaH

iv) $\text{Mg}(\text{OH})_2$

Group-B

Very Short Answer Questions:

[9×1=9]

2. Answer the following questions in one word/sentence.

- SI unit of force is derived unit, why?
- State Pascal's law.
- What is the conclusion of coin and feather experiment?
- What is the relation between joule and calorie?
- Define anomalous expansion of water?
- What is big bang theory?
- State modern periodic law.
- Why are protium deuterium and tritium called the isotopes of hydrogen?
- Define promoter.

Group-C

Short Answer Questions:

[14×2=28]

- Analyze and check the homogeneity of the equation $v^2 = u^2 + 2as$.
- Why Riccia are called amphibian plants?
- Even whales are found in water they are not considered as Pisces, why?
- How are drone and workers bees formed?
- Write down the significance of the study of life cycle of honey bee.
- Write in short about any one medicinal plant that can cure skin disease.
- List any two methods of conservation of wildlife.
- Prove that hydraulic machines are force multiplier.
- What change in gravitational force when the distance between two masses is doubled keeping the mass constant.
- Ice freezes from the top but ghee freezes from the bottom. why?
- What is the importance of gravitational force in the universe?
Explain.

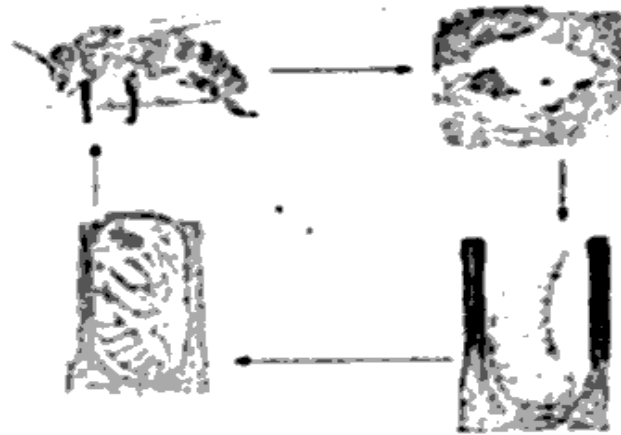
14. What happens to the chemical activity of the elements on going from top to bottom in a group? Why?
15. How does heat affect the rate of chemical reaction? Explain.
16. Write an information and a limitation of balanced chemical equation.

Group-D

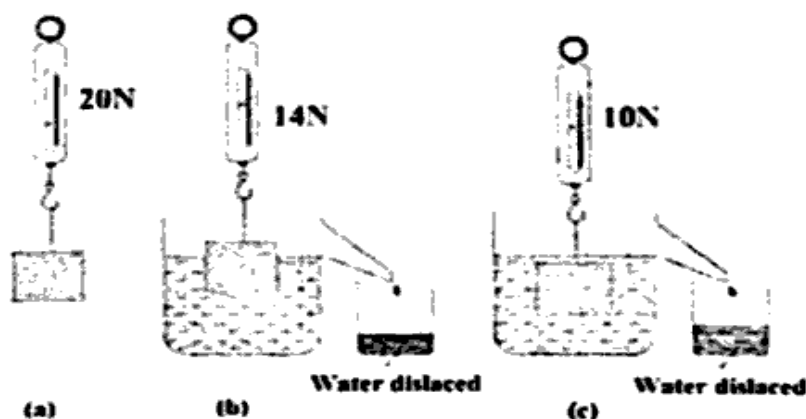
Long Answer Questions:

[7×4=28]

17. What do you mean by scientific learning? In an experiment to determine the sunlight for growth of the plants, identify independent variable, dependent variable and controlled variables.
18. Study the given figure and explain it briefly.



19. Mention the characteristics of Arthropoda. Write differences between Angiosperm and Gymnosperm. <https://www.nebstudy.com>
20. Write the condition for weightlessness. The mass of earth is 6×10^{24} kg and radius is 6400 km. If the height of the Mount Everest is 8848 m. Calculate the acceleration due to gravity at the top of Mount Everest. If the mass of the object is 80 kg, find its weight.
21. Study the given figure and answer:



- a) Calculate the upthrust in case of b and c.
- b) Write the cause of different upthrust in case b and c.
- c) State the principle on which this experiment is based on.

d) What happens to the weight of displaced liquid if salt is added to figure B?

22. Sita took three different liquid of same mass in the same type of container and placed in sun for 30 minutes. She recorded the increase in the temperature in the following table. Study the table and answer the questions that follow.

Liquid	Increase in temperature ($^{\circ}\text{C}$)
P	20
Q	25
R	18

- Which liquid the highest specific heat capacity? Why?
- If equal mass of all three liquids at the same temperature are cooled, which one will cool down faster?
- If the specific heat capacity liquid 'R' is $140 \text{ J/Kg}^{\circ}\text{C}$, write its meaning.

24. Study the given table and answer the following questions:

Elements	Electronic configuration
P	$1s^2, 2s^2 2p^6, 3s^1$
Q	$1s^2, 2s^2 2p^6, 3s^2 3p^6, 4s^1$
R	$1s^2, 2s^2 2p^6$
T	$1s^2, 2s^2 2p^6, 3s^2 3p^5$

- What is the valency of element R?
- Which one is more active between the elements P and Q, why?
- Write the name of compound formed after the reaction between P and T. Also mention the type of reaction with suitable reason.



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