



BK BIRLA CENTRE FOR EDUCATION
SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL
POST MID-TERM EXAM (2024-25)
SCIENCE (086)



Class: IX
Date: 09.01.25

Duration: 1 Hr
Max. Marks: 25

General Instructions:

- i. This question paper consists of 12 questions. All questions are compulsory.
- ii. There are three sections viz. A, B and C.
- iii. Section A – Q.no.1-2 are multiple choice questions carrying 1 mark each.
Q.no.3 is Assertion and Reason carrying 1 mark each.
- iv. Section B – Q.no. 4-8 are Very short Answer type questions carrying 2 marks each.
- v. Section C – Q.no.9-12 are short Answer type questions carrying 3 marks each.
- vi. There is no overall choice. However, an internal choice has been provided in some questions.
- vii. A student is expected to attempt only one of these.

Section–A

(Q.no.1-2 are multiple choice questions and Q no.3 is Assertion reason carrying 1 mark each)

(Select and write one most appropriate option out of the four options given for each of the questions)

1. What is the scientific name of Indian cow? 1
a) *Bos bubalis* b) *Apis indica* c) *Bos indica* d) *Brown swiss*
2. The mass number of the element is _____ 1
(a) The sum of the number of electrons and protons
(b) The sum of the number of protons and neutrons
(c) The number of neutrons
(d) The number of protons

For the following questions two statements are given, one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes

(a), (b), (c) and (d) as given below:

- a) *Both A and R are true and R is the correct explanation of the assertion.*
 - b) *Both A and R are true but R is not the correct explanation of the assertion.*
 - c) *A is true but R is false.*
 - d) *A is false but R is true*
3. Assertion: No work is done if the displacement is zero.
Reason: Work done by the force is defined to be the product of component of the force in the direction of the displacement and the magnitude of displacement. 1

Section–B

(Q.no.4-8 are short answer questions of 2 marks each)

4. Differentiate between: 2
(a) Milch animals and Draught animals.
(b) Layers and Broilers
5. (a) Define 1 J of work. 1
(b) A pair of bullocks exerts a force of 140 N on a plough. The field being ploughed is 15 m long. How much work is done in ploughing the length of the field? 1
6. What is the work to be done to increase the velocity of a car from 30 km h^{-1} to 60 km h^{-1} if the mass of the car is 1500 kg? 2
7. Draw the schematic atomic structure of: $_{11}^{23}\text{Na}$ and $_{8}^{16}\text{O}$ 2
8. Write the number of electrons present in:
(a) Mg^{2+} (b) He (c) N (d) O^{2-} 2

Section - C

(Q.no.9-12 are short answer questions of 3 marks each)

9. Which bee variety is commonly used for commercial honey production and what are the desirable characters of this bee variety? 3

OR

What is pasturage and how is it related to honey production? Why is bee-keeping preferred by farmers?

10. Explain the following terms:
a) Composite fish culture
b) Capture fishing
c) Mariculture 3
11. What is Kinetic energy? Prove that $\text{K.E} = \frac{1}{2}mv^2$ 3
12. Explain isotopes with suitable examples. Give two uses of isotopes. 3

*****Best of luck*****