

Shivagadhi English School
1st Terminal Examination 2081

Class :10 Subject: Science F. M. 75
Time :3hrs P.M. 30

1. Circle the correct alternative of the following questions. 10
- a. Which of the following is a fundamental unit ?
i) Newton ii) Pascal iii) Kilogram iv) Joule
- b. The number of scientific variables is
i) 2 ii) 3 iii) 4 iv) 10
- c. Who is known as the father of taxonomy ?
i) Whittaker ii) Carl woese
iii) Haeckel iv) Linnaeus
- d) Which phylum of the following has multi cellular , sessile & pore bearer animals ?
i) Annelida ii) Porifera iii) Coelenterate iv) Mollusca
- e) To which kingdom do organism having cell walls belong ?
i) Monera , Fungi , animalia ii) Fungi , plantae protista
iii) Fungi , planate , animalia iv) Fungi , plantae monera
- f) Which bee contains 16 chromosomes ?
i) Queen bee ii) Drone bee
iii) worker bee iv) Queen & worker
- g) For how long can a queen honey bee live ?
i) about 2-3 years ii) about 6 weeks
iii) about 24 weeks iv) up to 10 years
- h) Which bee is formed when the larva is fed royal jelly continuously?
i) Queen ii) Drone iii) Workers iv) queen & workers
- i) Which nitrogenous base is not found in DNA ?
i) Adenine ii) Guanine iii) Thymine iv) Uracil
- j) What plant did mendel use for his experiment ?
i) Pea ii) maize iii) Gram iv) Bean

Group B

Write very short answer to the following questions. 9x1=9
2. Why are controlled variables important in experiments ?

3. What is the unit of electric current ?
4. Name two vascular plants .
5. The spider has four pairs of jointed legs , which phylum does it belong?
6. Who proposed the five- Kingdom system of classification ?
7. Which bee in the hive is responsible for laying eggs ?
8. Write the various types of bee found in the hive .
9. What is gene ?
10. Write the full form of IVF.
- Group C
- Short answer type questions 14x2=28
11. $v^2 = ut$ is valid or not ?
12. What is the unit of pressure ? why is it called derived unit ?
13. Find out the fundamental units involved in the given derived unit .
a) Newton b) Watt
14. Define independent variable . Write its importance in scientific research
15. The bryophytes are called amphibian plants why ?
16. List the five kingdoms with characteristic feature.
17. Write the importance of classification .
18. Why are honey bees called social insects ?
19. Write the classification of honey bee.
20. Why male bees die after mating with a queen.
21. Differentiate between autosomes & sex chromosome .
22. How is sex determined in humans ? Explain with a chart .
23 . What is a chromosome ? what are its constituents ?
24. Describe the law of dominance in short with a chart.

Group D

- Long answer type questions 7x4=28
25. Raman wants to investigate which colour of an object has the highest capacity to absorb heat. He took four tin cans & painted them with black white , green & red colours respectively . He poured an equal amount of water into each in

a sunlight for an hour After that , he measured the temperature of the water in each can using a thermometer . Answer the following questions . based on this experiment.

- i) Write the independent & dependent variables .
- ii) Which variables should be controlled by Raman ? Explain .
- iii) How will Raman ensure that the temperature measurements are accurate ?
- iv) What is the hypothesis of this experiment?

26. Niva claimed that an alternative formula for power is

$$p= mv^2 \text{ & the formula for pressure is } p=\frac{mv}{A}$$

Check the validity of given formula by the analysis of units .

27. Ram visited his kitchen garden where he saw a bee sucking the nectar from mustard flower . Then he classified bee & mustard . In which phylum/ division did he put the bee & the mustard ? Write two characters of each .

28. Explain the life cycle of honey bee with diagram.

29. What is artificial insemination ? How is it differ from IVF ?

List the process of test tube baby .

30. In what ratio will black & brown dogs be seen when Black (BB) & brown (bb) dogs are crossed together ? Show with the help of chart up to f_2 generation .

31. Study the given diagram to answer the following questions

	R	r
R	RR	Rr
r	Rr	rr

- i) Which filial generation is shown in the given diagram.
- ii) Write the phenotype & genotype of the generation .
- iii) Mention the character of parents participated in it .
- iv) How does it support the law of purity of gametes ?

The End