

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) Jo

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 be 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 chrosome ? 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

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	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