



Special Model Tests with Answers

as per NCTB provided question pattern, assessment guidelines & marks distribution



Model Test 01

Time : 3 hours

Half-Yearly Exam

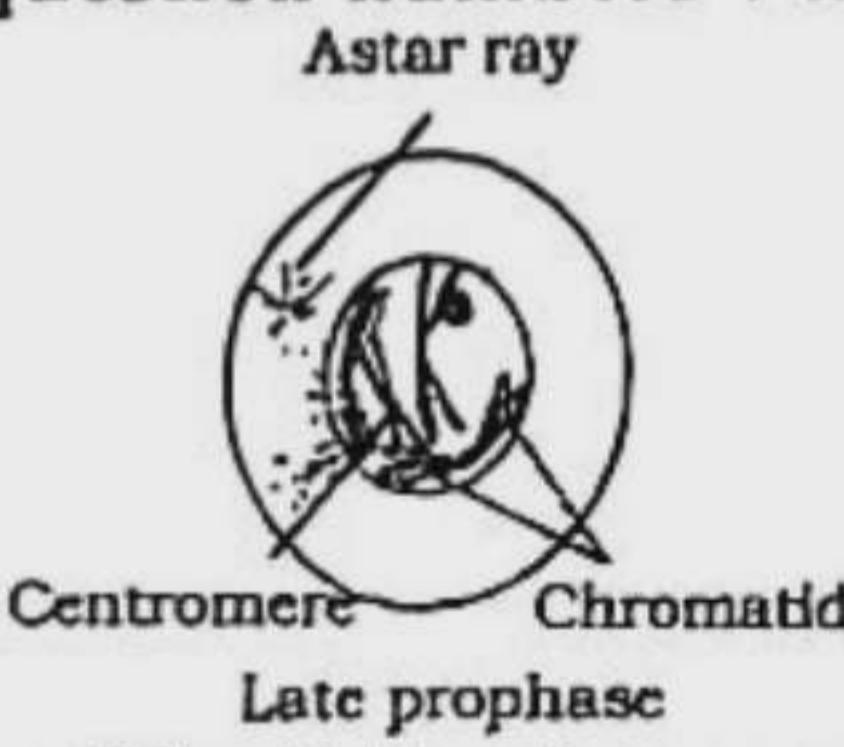
Science Class : Eight

Full marks : 100

$1 \times 30 = 30$

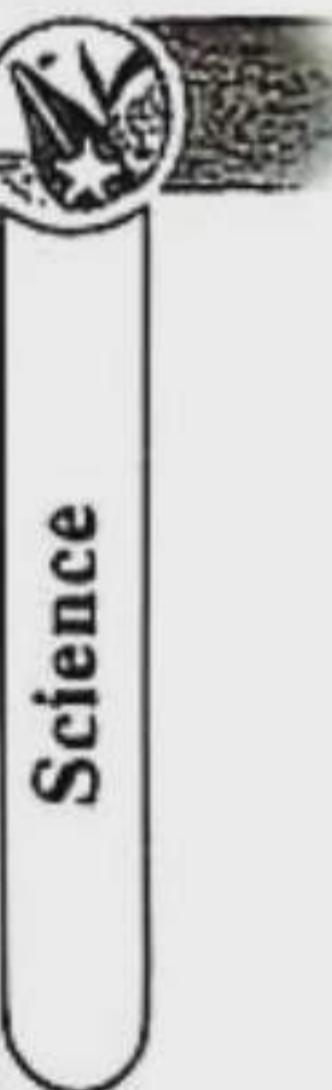
Multiple Choice Questions (Each question carries 1 mark)

[N.B. : Answer all the questions. Each question carries one mark. Block fully, with a ball-point pen, the circle of the letter that stands for the correct/best answer in the "Answer Sheet" for Multiple Choice Question Type Examination.]

1. Leech belongs to which phylum?
Ⓐ Cnidaria Ⓑ Nematoda
Ⓒ Annelida Ⓒ Mollusca
2. Which one discharge wastage with the organ nephridia?
Ⓐ Earthworm Ⓑ Cockroach
Ⓒ Round worm Ⓒ Hydra
3. In case of tape worm—.
i. Body is tubular
ii. Body bears sucker and hooks
iii. Digestive system is absent in body
Which one of the following is correct?
Ⓐ i & ii Ⓑ i & iii Ⓒ ii & iii Ⓓ i, ii & iii
4. Which one is from the phylum Annelida?
Ⓐ Butterfly Ⓑ Round worm
Ⓒ Leech Ⓒ Crab
5. As per the stem, where does the cell division occur?
Ⓐ Inside the stamen Ⓑ Apex of root
Ⓒ Buds Ⓒ In the stem
6. At what phase do the chromosomes stay along the equatorial plane?
Ⓐ Metaphase Ⓑ Pro-metaphase
Ⓒ Anaphase Ⓒ Telophase
7. Look at the picture below and answer to the following question numbers 7 and 8 :


Aster ray
Centromere Chromatid
Late prophase
8. Which one of the following appears at this stage in case of animal cells?
Ⓐ chromosome Ⓑ nucleolus
Ⓒ aster ray Ⓒ centromere
9. The elements that disappear at this phase—.
i. nucleolus ii. nuclear membrane
iii. spindle fibre
Which one is correct?
Ⓐ i & ii Ⓑ ii & iii Ⓒ i & iii Ⓓ i, ii & iii
10. Animal cell membrane is called—.
Ⓐ plasmalemma Ⓑ xylem
Ⓒ phloem Ⓒ artery
11. Which one of the following is a permeable membrane?
Ⓐ Cell wall Ⓑ Cell membrane
Ⓒ Polythene Ⓒ Fish potka
12. What happens if swelled dry grapes are kept in honey?
Ⓐ Diffusion Ⓑ Osmosis
Ⓒ Transpiration Ⓒ Imbibition
13. Which one is impermeable membrane?
Ⓐ cell wall Ⓑ cell membrane
Ⓒ polythene Ⓒ membrane of fish potka

13. Which one is stolon?
Ⓐ Ginger Ⓑ Garlic
Ⓒ Potato Ⓒ Pudina
14. By which one the reproduction of segun plant is occurred?
Ⓐ Through root Ⓑ Segmentation
Ⓒ Through stem Ⓒ Through leaves
15. Which one is rhizome?
Ⓐ Potato Ⓑ Ginger Ⓒ Garlic Ⓓ Arum
16. In which plant new plants originate from the buds created in leaves edge?
Ⓐ Rubble Ⓑ Sweet potato
Ⓒ Ginger Ⓒ Colocasia
17. When was the idea about atom originated?
Ⓐ 2700 years ago Ⓑ 2600 years ago
Ⓒ 2500 years ago Ⓒ 2400 years ago
18. What is the atomic number of carbon?
Ⓐ 6 Ⓑ 7 Ⓒ 8 Ⓓ 9
19. What are the number of fundamental elements?
Ⓐ 109 Ⓑ 112 Ⓒ 115 Ⓓ 118
20. Isotope applies to—.
i. hydrogen ii. argon
iii. carbon
Which one is correct?
Ⓐ i & ii Ⓑ ii & iii Ⓒ i & iii Ⓓ i, ii & iii
21. Where will an object have maximum weight?
Ⓐ in any pole Ⓑ in any mine
Ⓒ on any hill top Ⓒ in any valley
22. In which country will an object have the least weight?
Ⓐ Finland Ⓑ Ireland
Ⓒ Netherland Ⓒ Poland
23. How many types of electric current are there?
Ⓐ 2 Ⓑ 3 Ⓒ 4 Ⓓ 5
24. The source of non-periodic current is—
Ⓐ Generator Ⓑ Transmitter
Ⓒ Power plant Ⓒ Battery
25. $1 \text{ Ohm} = ?$
Ⓐ $1 \text{ Ohm} = \frac{1\text{V}}{1\text{A}}$ Ⓑ $1 \text{ Ohm} = \frac{1\text{A}}{1\text{V}}$
Ⓒ $1 \text{ Ohm} = 1\text{A} \times 1\Omega$ Ⓒ None of the above
26. How many switches are there for all bulbs in a series circuit?
Ⓐ One Ⓑ Two
Ⓒ Separate for each Ⓒ Many switches
27. What form of carbohydrate gets into the whole body through blood stream?
Ⓐ Glucose Ⓑ Fructose
Ⓒ Galactose Ⓒ All the above
28. Which protein has easily quotient 1?
Ⓐ Fish Ⓑ Meat Ⓒ Pulse Ⓓ Egg
29. What percentage of nitrogen does mutton contain?
Ⓐ 16% Ⓑ 26% Ⓒ 36% Ⓓ 46%
30. How many amino acids does protein contain?
Ⓐ 18 Ⓑ 20 Ⓒ 22 Ⓓ 24



Science

Short-Answer Question (Each question carries 2 marks)**Answer any 10 of the following questions :**

1. What is binomial nomenclature? Explain.
2. What are cnidocytes? Explain.
3. Write two characteristics of mitosis division.
4. In which cells does mitosis division not occur?
5. What is a hydrophilic substance? Give examples.
6. Mention two important roles of transpiration.
7. What is meant by natural vegetative reproduction?
8. Mention two advantages of vegetative reproduction.

 $2 \times 10 = 20$

9. Explain the results obtained from Rutherford's experiment.
10. Why are the atomic numbers of hydrogen and oxygen different?
11. Why is the gravitational constant called universal?
12. Why is acceleration due to gravity object-independent?
13. Write about electric potential difference.
14. What are the nutrition elements? Explain.
15. What does the nature of food mean?

Creative Question (Each question carries 10 marks)**Answer any 5 of the following questions :**

1. Look at the pictures below and answer to the following questions :


A

B

C

 - a. What are the sub-phylum of Chordata? 1
 - b. In what way animal 'B' helps a student? 2
 - c. What classes do animals A, B and C belong to? Write two distinctive features for each class. 3
 - d. "All the three animals can ensure tremendous benefit."— Justify the statement. 4
2. X—Ending of Karyokinesis.
Y—Chromosomes divide once, nucleus divides twice.
 - a. What is DNA? 1
 - b. Why the colour of Mitu's eyes is similar to the colour of her grandmother's eyes? 2
 - c. Explain the phase 'X'. 3
 - d. How the hereditary trait is maintained by 'Y'? Analyze it. 4
3. Jihan uses Atar in his body and his classmates get fragrance of it. On the other hand, Siam finds that raisins or dry grapes got wet in water swell and grow fat.
 - a. What is transpiration? 1
 - b. Dry wood is hydrophilic— Explain. 2
 - c. Explain the reason of getting fragrance of the classmates of Jihan? 3
 - d. The methods occurred in the stem are important in the lives of men and creatures. Explain it. 4
4. There are tall Shimul trees in Mr. Kalu's garden. In the gaps there are pumpkin plant which has been flowered. He tried to catch a butterfly that sat on the flower. While trying that, yellow-colour powder stuck to his hand from the stamen of the flower.
 - a. What is germination? 1
 - b. Why Yam is called Bulbil? Explain. 2
 - c. How mother cell is produced with the powders stuck to Mr. Kalu's hand? Explain. 3
 - d. Will the pollination of the trees of Mr Kalu's garden be done by same agent? Give opinion with logic. 4

 $10 \times 5 = 50$

5. "A" and 'B' are two elements those have atomic number 11 and 17 respectively, Mass number are 23 and 35 respectively of that elements.
 - a. What is isotope? 1
 - b. What do you mean by the mass number of oxygen is 16? 2
 - c. Calculate the electron, proton and neutron number of 'A' element. 3
 - d. Explain the process by which the atoms of above mentioned two elements get stability. 4
6. Mr. 'X' of 735 Newton weight suddenly fall down front the one-storeyed building. He goes to the doctor for treatment, To move up-down needs lift to the chamber. He feels heavy when goes up by lift.
 - a. What is acceleration due to gravity? 1
 - b. Why the value of 'g' is different, in equator region and polar region? 2
 - c. Calculate the mass of Mr. 'X'. 3
 - d. Analyse the reasons of the two occurrence of the stem. 4
7. A 10 ampere fuse is used for an electric bulb in Diba's room. For this the bulb has fused, v On the other hand Mr. Zahid takes die decision to connect the electrical equipments with parallel circuit in his new house.
 - a. What is resistance? 1
 - b. Explain the Ohm's law. 2
 - c. Explain the reason to be fused the bulb of Diba's room. 3
 - d. How much logical the decision taken by Mr. Zahid? Analyze. 4
8. X Hilsa fish, Chicken Y Guava, Orange, Tomato

 Z Fish oil, Yolk, Edible oil
 - a. What is roughage? 1
 - b. Why is hotchpotch called a mixed food? 2
 - c. Explain the importance of X in building body. 3
 - d. Analyze the role of Y and Z in preventing osteomalacia and scurvy. 4

Answer Sheet ▶ Multiple Choice Questions

1	(C)	2	(A)	3	(A)	4	(C)	5	(A)	6	(A)	7	(C)	8	(A)	9	(A)	10	(A)	11	(B)	12	(C)	13	(D)	14	(A)	15	(B)
16	(A)	17	(D)	18	(A)	19	(D)	20	(C)	21	(A)	22	(C)	23	(A)	24	(A)	25	(A)	26	(A)	27	(A)	28	(D)	29	(A)	30	(C)

Answering Reference ▶ Short-Answer Questions

- | | | | |
|------------------------------|------------------------------|-------------------------------|-------------------------------|
| 1 ▶ See Chapter 01; Ques. 01 | 5 ▶ See Chapter 03; Ques. 16 | 9 ▶ See Chapter 06; Ques. 06 | 13 ▶ See Chapter 09; Ques. 03 |
| 2 ▶ See Chapter 01; Ques. 09 | 6 ▶ See Chapter 03; Ques. 22 | 10 ▶ See Chapter 06; Ques. 11 | 14 ▶ See Chapter 13; Ques. 02 |
| 3 ▶ See Chapter 02; Ques. 06 | 7 ▶ See Chapter 04; Ques. 07 | 11 ▶ See Chapter 07; Ques. 04 | 15 ▶ See Chapter 13; Ques. 04 |
| 4 ▶ See Chapter 02; Ques. 10 | 8 ▶ See Chapter 04; Ques. 15 | 12 ▶ See Chapter 07; Ques. 10 | |

Answering Reference ▶ Creative Questions

- | | | | |
|------------------------------|------------------------------|------------------------------|------------------------------|
| 1 ▶ See Chapter 01; Ques. 03 | 3 ▶ See Chapter 03; Ques. 05 | 5 ▶ See Chapter 06; Ques. 05 | 7 ▶ See Chapter 09; Ques. 08 |
| 2 ▶ See Chapter 02; Ques. 08 | 4 ▶ See Chapter 04; Ques. 08 | 6 ▶ See Chapter 07; Ques. 04 | 8 ▶ See Chapter 13; Ques. 04 |

 Model Test 02

Time : 3 hours

Half Yearly Exam

Science Class : Eight

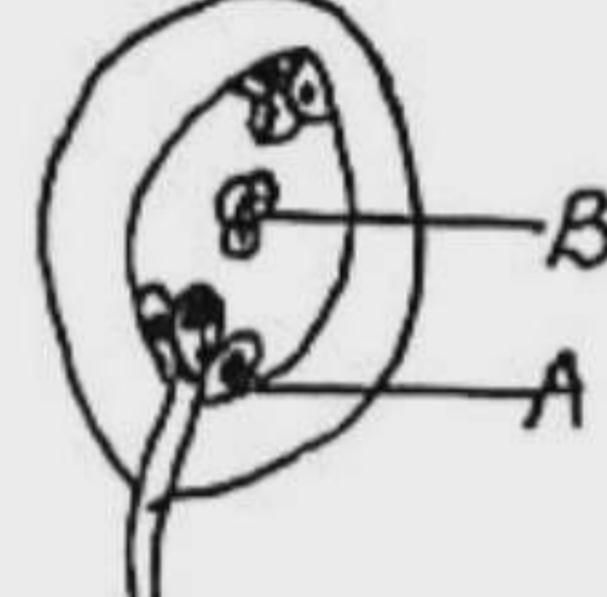
Full marks : 100

 $1 \times 30 = 30$

Multiple Choice Questions (Each question carries 1 mark)

[N.B. : Answer all the questions. Each question carries one mark. Block fully, with a ball-point pen, the circle of the letter that stands for the correct/best answer in the "Answer Sheet" for Multiple Choice Question Type Examination.]

1. How many animal species have been identified so far?
 A 15 million B 1.5 million
 C 0.15 million D 0.015 million
2. Which one of the following relates to the study of Biology?
 A Astronomy B Astrology
 C Taxonomy D Toxicology
3. What is the animals of phylum Porifera commonly known as?
 A Sponge B Spongilla
 C Aurelia D Euglena
4. Which of the following animals are simplest in nature?
 A Butterfly B Spongilla
 C Ant D Hydra
5. How many types of cell division are there in the animal body?
 A 2 B 3 C 4 D 5
6. Where is direct cell division occurred?
 A Yeast B Stem
 C Radical D Reproductive mother cell
7. Life of a multicellular animal begins with—.
 A multicellular zygote B single cell zygote
 C double cell zygote D triple cell zygote
8. Amitosis takes place in—.
 A Spongilla B Hydra C Amoeba D Scypha
9. Actually, which process helps to keep stem and leaf fresh and straight?
 A Osmosis B Diffusion
 C Transpiration D Imbibition
10. Which is the semi-permeable membrane?
 A Polythene B Cutin cell wall
 C Cell wall D Cell membrane
11. The water molecule enters into dry grapes by—.
 i. Osmosis
 ii. Diffusion
 iii. Transpiration
 Which one is correct?
 A i B i & ii C i & iii D i, ii & iii
12. The substance of the plant body is—.
 A Cell wall B Protoplasm
 C Cytoplasm D Cellulose
13. In which one reproduction through root occurs?
 A Ginger B Onion C Garlic D Patol
14. Which one remains parallel under soil?
 A Onion B Potato C Arum D Ginger
15. Which one is the example of bulb?
 A Ginger B Garlic
 C Arum D Mint (Pudina)
16. Which one is the reproductive organ of colocasia?
 A Bulb B Stolon
 C Rhizome D Offset

17. What is an atom composed of?
 A Electron B Proton
 C Neutron D All the above
 18. If the atomic number of oxygen is 8—.
 i. number of proton is 8
 ii. 6 electrons in second orbit
 iii. mass number is 8
 Which one of the following is correct?
 A i & ii B i & iii C ii & iii D i, ii & iii
 19. Which is the atomic number of aluminium?
 A 11 B 12 C 13 D 14
 20. Of which element is Tritium an isotope?
 A Hydrogen B Oxygen
 C Silicon D Carbon
 21. Which one of the following is a constant?
 A m B F C M D W
 22. In which country will the weight of an object be the least?
 A New Zealand B Finland
 C China D Congo
 23. What is the appropriate fuse for the second element?
 A 5 ampere B 10 ampere
 C 15 ampere D 30 ampere
- Answer to the questions No. 24 and 25 according to the stem.
- 
24. What is the name of the labeled part 'B'?
 A Egg B Ovum
 C Secondary nucleus D Antipodals
 25. 'A' part of the figure—
 i. form embryo
 ii. Produce fruits
 iii. forms coating
 Which one is correct?
 A i B ii C i & iii D ii & iii
 26. The fuse of which value is suitable for television?
 A 5 ampere B 10 ampere
 C 15 ampere D 20 ampere
 27. Excessive perspiration is a symptom of—.
 A hypothyroidism B hypoglycemia
 C psoriasis D arthritis
 28. What element separates protein from carbohydrate?
 A Carbon B Hydrogen
 C Oxygen D Nitrogen
 29. Which one is pure food?
 A Milk B Guava C Egg D Sugar
 30. How much energy can get from 10 gm butter?
 A 40 kilocalorie B 46 kilocalorie
 C 64 kilocalorie D 90 kilocalorie



Science

Short-Answer Question (Each question carries 2 marks)**Answer any 10 of the following questions :**

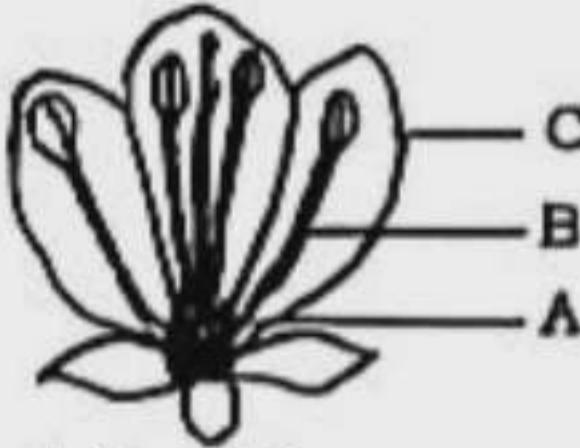
1. Write two characteristics of the sponge.
2. Write two differences between *Fasciola* and *Ascaris*.
3. Why does amitosis not occur in the human body?
4. How many stages are there in mitosis cell division and what are they?
5. How does transpiration keep the plant body cool?
6. What is meant by transport in plants?
7. What is a transformed stem? Explain.
8. How is grafting done?
9. Rutherford's model is similar to the solar system - explain.

SOL-Y-1:

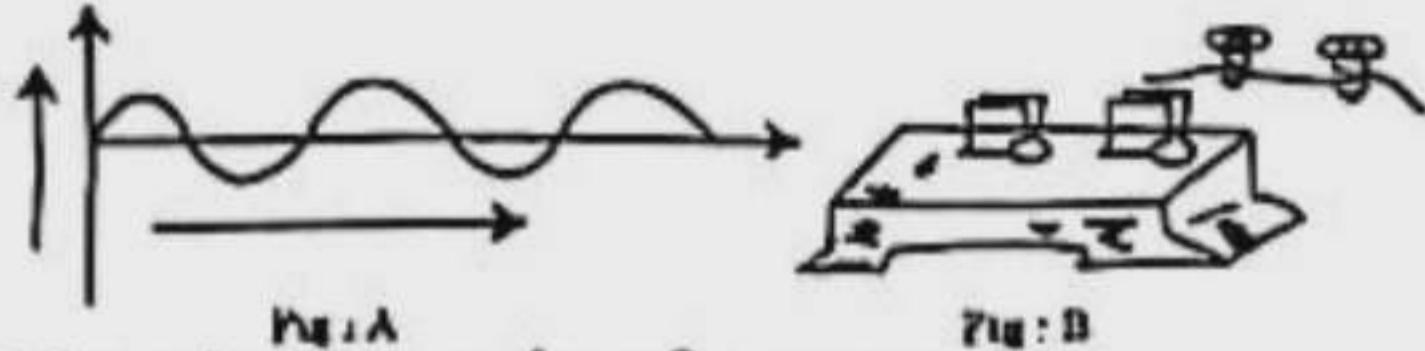
 $2 \times 10 = 20$

10. What information can be obtained from the atomic number of carbon being 6?
11. If the distance between two objects is tripled, what will be the gravitational force?
12. Why does the value of g vary at different locations on Earth?
13. Why is potential difference necessary for electric current?
14. In how many ways can resistance be connected in a circuit?
15. What problems occur due to lack of carbohydrate in the body?

Creative Question (Each question carries 10 marks)**Answer any 5 of the following questions :**

1. In practical class sir shows some typical samples of Hammer fish, *Ascidia*, *Petromyzon*. After showing this animals sir said that there is a procedure to identify millions of other animals individually. This procedure is divided into seven steps.
 - a. What is coelom? 1
 - b. Why frog is called amphibian animal? 2
 - c. Explain the systematic-position of the first two animals that mentioned in the stem. 3
 - d. Evaluate the requirements of the procedure mentioned by sir. 4
2. Tonima, a student of class eight, looks after her mother. A diagram of the step of cell division is hung on the wall in her reading room whose chromosomes are shaped in English alphabet.
 - a. What is interphase? 1
 - b. Why the cell division of Amoeba is called direct cell division? 2
 - c. Explain the diagram hung in Tonima's room with labelling. 3
 - d. According to stem, why the appearance of Tonima like this—analyze it. 4
3. Risha went to her uncle's house in winter. When she went to see the farm, she observed plant some are dead and some are alive. She asked her uncle. About this her uncle advised and explained her its absorption of water and mineral salts and also transpiration.
 - a. What is imbibition? 1
 - b. Why is fish potka called semi-permeable membrane? 2
 - c. Explain the third process from this paragraph. 3
 - d. Compare method (i) with method (ii) mentioned in the stem and describe. 4
4.
 
 - a. What is called fruit? 1
 - b. What is meant by inflorescence? 2

 $10 \times 5 = 50$

- c. How to produce egg in the stem mentioned
A—Explain. 3
- d. Analyze the function of B and C in pollination. 4
5. The number of atom of the molecule A is 6, But the number of mass is different in different atoms. Again the number of atom in another molecule B is 3 which is not stable.
 - a. What Is symbol? 1
 - b. NaOH Is an alkali—Explain. 2
 - c. Explain the cause of difference of mass number of element A. 3
 - d. How will the element B mentioned in the stem attain stability? Analyze. 4
6. A material of 100 kg mass posses 9.8 meter/sec² acceleration due of gravity. The material is taken to the moon and its weight changes.
 - a. What is gravitation? 1
 - b. Why does a fish under clear water seem nearer? 2
 - c. Determine the weight on earth of the thing mentioned in the stem. 3
 - d. Why does the weight of the thing mentioned in the stem vary on the moon? Analyze. 4
7.
 
 - a. What is the unit of current? 1
 - b. What do you mean by resistance? 2
 - c. What kind of current flow in figure 'A'? Explain. 3
 - d. Explain the role of figure 'B' to avoid electrical accident. 4
8. The weight of Mr. Sharif is 85 kg. He likes to eat fish and meat. But he does not like to eat sour fruits and colourful vegetables.
 - a. What is balanced diet? 1
 - b. Why rice is called carbohydrates? 2
 - c. Determine how much carbohydrates required by Mr. Sharif daily. 3
 - d. Explain what problems Mr. Sharif has to be faced due to lack of the foods he dislikes to eat. 4

✓ Answer Sheet ► Multiple Choice Questions

1	(b)	2	(c)	3	(a)	4	(b)	5	(b)	6	(a)	7	(b)	8	(c)	9	(a)	10	(d)	11	(a)	12	(d)	13	(d)	14	(d)	15	(b)
16	(b)	17	(d)	18	(a)	19	(c)	20	(a)	21	(c)	22	(d)	23	(a)	24	(c)	25	(a)	26	(a)	27	(b)	28	(d)	29	(d)	30	(d)

✓ Answering Reference ► Short-Answer Questions

- | | | | |
|------------------------------|------------------------------|-------------------------------|-------------------------------|
| 1 ► See Chapter 01; Ques. 04 | 5 ► See Chapter 03; Ques. 19 | 9 ► See Chapter 06; Ques. 07 | 13 ► See Chapter 09; Ques. 04 |
| 2 ► See Chapter 01; Ques. 14 | 6 ► See Chapter 03; Ques. 25 | 10 ► See Chapter 06; Ques. 12 | 14 ► See Chapter 09; Ques. 17 |
| 3 ► See Chapter 02; Ques. 05 | 7 ► See Chapter 04; Ques. 09 | 11 ► See Chapter 07; Ques. 05 | 15 ► See Chapter 13; Ques. 12 |
| 4 ► See Chapter 02; Ques. 11 | 8 ► See Chapter 04; Ques. 17 | 12 ► See Chapter 07; Ques. 11 | |

✓ Answering Reference ► Creative Questions

- | | | | |
|------------------------------|------------------------------|------------------------------|------------------------------|
| 1 ► See Chapter 01; Ques. 10 | 3 ► See Chapter 03; Ques. 07 | 5 ► See Chapter 06; Ques. 06 | 7 ► See Chapter 09; Ques. 15 |
| 2 ► See Chapter 02; Ques. 11 | 4 ► See Chapter 04; Ques. 13 | 6 ► See Chapter 07; Ques. 08 | 8 ► See Chapter 13; Ques. 10 |

 Model Test 03

Time : 3 hours

Half-Yearly Exam

Science Class : Eight

Full marks : 100

 $1 \times 30 = 30$

[N.B. : Answer all the questions. Each question carries one mark. Block fully, with a ball-point pen, the circle of the letter that stands for the correct/best answer in the "Answer Sheet" for Multiple Choice Question Type Examination.]

1. What is the lowest stage of classification?
Ⓐ Order Ⓑ Family Ⓒ Genus Ⓓ Species
2. In case of classification, 'division' refers to—
Ⓐ Family Ⓑ Phylum Ⓒ Order Ⓓ Class
3. Most of the animals belonging to phylum Porifera are—
Ⓐ Terrestrial animals Ⓑ Arboreal animals
Ⓒ Fresh water animals Ⓒ Marine animals
4. Animals belonging to phylum Porifera live in—
i. fresh water ii. saline water
iii. polar regions
- Which one is correct?
Ⓐ i & ii Ⓑ ii & iii Ⓒ i & iii Ⓓ i, ii & iii
5. Read the following passage and answer the question numbers 5 and 6 :
Amoeba runs its reproduction through the process called amitosis. Amitosis is applicable to unicellular organisms only.
6. What phylum does amoeba belong to?
Ⓐ Protozoa Ⓑ Porifera
Ⓒ Platyhelminthes Ⓒ Cnidaria
7. Amitosis refers to—
i. division of nucleus
ii. division of cytoplasm
iii. formation of daughter cells
- Which one is correct?
Ⓐ i & ii Ⓑ ii & iii Ⓒ i & iii Ⓓ i, ii & iii
8. Direct cell division takes place in—
Ⓐ Porifera Ⓑ Protozoa
Ⓒ Cnidaria Ⓒ Nematoda
9. In case of plants, mitosis takes place in—
Ⓐ cell membrane Ⓑ reproductive tissue
Ⓒ meristematic tissue Ⓒ all the above
10. Which one of the following is a colloidal substance?
Ⓐ cellulose Ⓑ cell wall
Ⓒ cell membrane Ⓒ chlorophyll
11. The least rate of transpiration takes place through—
Ⓐ stomata Ⓑ cuticle Ⓒ lenticel Ⓓ phloem
12. Which is the 'Necessary evil' for plant?
Ⓐ Diffusion Ⓑ Osmosis
Ⓒ Imbibition Ⓒ Transpiration
13. Which one is a special physiological activity of plants?
Ⓐ osmosis Ⓑ diffusion
Ⓒ absorption Ⓒ transpiration
14. Origin of spores belong to—
Ⓐ pollination Ⓑ germination
Ⓒ sexual reproduction Ⓒ asexual reproduction
15. How many kinds of spores are there?
Ⓐ 2 Ⓑ 3 Ⓒ 4 Ⓓ 5
16. What type of plant is fern?
Ⓐ Sporal Ⓑ Conidia
Ⓒ Flowering Ⓒ Stolon

17. Features of this plant—
i. they do not produce any gamete
ii. they belong to vegetative reproduction
iii. they produce conidia
Which one is correct?
Ⓐ i & ii Ⓑ ii & iii Ⓒ i & iii Ⓓ i, ii & iii
18. What is the mass number of second isotope of carbon?
Ⓐ 7 Ⓑ 8 Ⓒ 12 Ⓓ 13
19. How many proton are there in oxygen atom?
Ⓐ 4 Ⓑ 8 Ⓒ 16 Ⓓ 32
20. Who first thought about atom?
Ⓐ Democritus Ⓑ Theophrastus
Ⓒ Aristotle Ⓒ Plato
21. When was atom thought about first?
Ⓐ in 200 B.C. Ⓑ in 200 A.D.
Ⓒ in 400 B.C. Ⓓ in 400 A.D.
22. The value of acceleration due to gravity 'g' is higher in—
Ⓐ equator region Ⓑ polar region
Ⓒ at the center of the earth Ⓒ at moon
23. What is electric current?
Ⓐ Flow of energy Ⓑ Flow of electrons
Ⓒ Flow of protons Ⓒ Flow of neutrons
24. Which of the following helps in the flow of electricity?
Ⓐ Electron Ⓑ Proton
Ⓒ Neutron Ⓒ Positron
25. What is the unit of electric current?
Ⓐ Ampere Ⓑ Newton
Ⓒ Ohm Ⓒ Volt
26. What is the international practical unit of potential difference?
Ⓐ Volt Ⓑ Coulomb
Ⓒ Watt Ⓒ Ampere
27. Which is the structure element of our body?
Ⓐ Protein Ⓑ Carbohydrates
Ⓒ Fat Ⓒ Vitamins
28. Weight of Mr 'X' is 65 Kgs. How much amount of carbohydrate he needs daily?
Ⓐ 14.13 gram Ⓑ 260 gram
Ⓒ 299 gram Ⓒ 585 gram
29. Which of the following food items does not contain even a single microgram of vitamin?
Ⓐ Beef Ⓑ Cod fish
Ⓒ Cashew nut Ⓒ Cherry
30. Which vitamin is given in drops to a new born baby?
Ⓐ Vitamin C Ⓑ Vitamin K
Ⓒ Vitamin D Ⓒ Vitamin E



Short-Answer Question (Each question carries 2 marks)**Answer any 10 of the following questions :**

1. Write two characteristics of the phylum Cnidaria.
2. Write the names of two Annelida phylum animals.
3. Give an idea about the attraction fiber.
4. Write two characteristics of the telophase stage.
5. How does transpiration help in causing rainfall?
6. Why are xylem and phloem called the pathways of transport in plants?
7. Why is a tuber called an eye?
8. Write two differences between sexual reproduction and asexual reproduction.

 $2 \times 10 = 20$

9. Explain the structure of an atom.
10. How is the number of neutrons in an atom calculated?
11. What is gravitational force? Explain.
12. Explain the concept of mass.
13. What is a parallel circuit? Explain.
14. Why is simple carbohydrate important for nutrition in the human body?
15. What are the problems caused by the lack of essential amino acids in the body?

Creative Question (Each question carries 10 marks)**Answer any 5 of the following questions :**

1. In order to give conception of the animal kingdom the science teacher drew the following pictures and said, "To know the animal kingdom its systematic arrangement is a must."



Fig : 1



Fig : 2

- a. What is binomial naming? 1
- b. Why does mussel belong to phylum Mollusca? 2
- c. Explain the dissimilarities between picture-1 and picture-2. 3
- d. Evaluate the genuineness of the statement of the science teacher. 4

2. Scene-1 : Total growth of animal happen by the expansion of zygote.

Scene-2 : Multicellular animal reproduce babies and transmission of hereditary traits.

Scene-3 : Nucleic acid is the real hereditary traits of animals.

- a. What is called Caryokinesis? 1
- b. Explain when in stage the chromosomes are found shortest and quite thick. 2

- c. Explain the feature of activities which happen in scene-1. 3
- d. To maintain the characteristics of species in scene-2 and scene-3 both have a vital role. — Analyze logically. 4

3. In Chemical Laboratory, Ishtiaq dropped some blue vitriol in the water of beaker and observed that whole water of the beaker become blue color slowly. After going home he saw his mother immersed some dried grapes in a bowl which was inflated.

- a. What is lime water? 1
- b. What role does osmosis play in the animal body? 2

- c. Explain what will happen if Ishtiaq drops a piece of zinc in the beaker? 3
- d. Analyze comparatively the act of inflation of the dried grape and the incident he observed in the Laboratory. 4

- 4.



Fig-A



Fig-B



Fig-C

 $10 \times 5 = 50$

- a. What is osmosis? 1
- b. Why does cell wall absorb water? 2
- c. How is the figure A produced? Describe. 3
- d. Are the systems of transfer of pollen grains of figure-B and C different? Give logic to your answer. 4
5. X, Y and Z are the elements. Their atomic number are 10, 11 and 17 respectively.
 - a. What is called atom? 1
 - b. Why isotope is used in medical sector? 2
 - c. Draw the electronic configuration of the element 'X' with explanation. 3
 - d. Are the elements Y and Z able to form compound?— Give your opinion with logic. 4
6. Tamal is a student of class eight. There are many questions arise in his mind about the packet of sugar of 90 Kg. In future he wants to be a scientist of NASA.
 - a. What is outer space? 1
 - b. What is meant by Galaxy? 2
 - c. Determine the weight of the substance of the above stem in moon. 3
 - d. What type of change will occur of the weight of the substance of the above stem, if it carry to north pole? Explain with mathematical logic. 4

- 7.
-
- a. What is the source of alternate current? 1
 - b. How is I related to R? 2
 - c. Explain the energy change in the circuit. 3
 - d. Excessive flow of electricity will cause financial harm to the householder. Do you agree? Clarify your view. 4
8. Mr Rahman is 40 years old. His mass is 55 kg. By the advice of doctor, he takes 100 gm chira as his breakfast now a days. In every 20 gm chira, there are 15.4 gm carbohydrate, 1.32 gm protein and 0.24 gm lipids.
 - a. What is food? 1
 - b. What do you mean by Roughage? Explain. 2
 - c. Calculate the amount of energy that Mr. Rahman find from the chira. 3
 - d. How much amount of carbohydrate he intake from the other foods at day long for his fitness? Give your opinion mathematically. 4

Answer Sheet ► Multiple Choice Questions

1	(d)	2	(b)	3	(d)	4	(a)	5	(a)	6	(d)	7	(b)	8	(c)	9	(a)	10	(c)	11	(d)	12	(a)	13	(d)	14	(a)	15	(a)
16	(a)	17	(d)	18	(b)	19	(a)	20	(c)	21	(b)	22	(d)	23	(a)	24	(a)	25	(a)	26	(a)	27	(a)	28	(c)	29	(a)	30	(b)

Answering Reference ► Short-Answer Questions

- | | | | |
|------------------------------|------------------------------|-------------------------------|-------------------------------|
| 1 ► See Chapter 01; Ques. 07 | 5 ► See Chapter 03; Ques. 20 | 9 ► See Chapter 06; Ques. 08 | 13 ► See Chapter 09; Ques. 19 |
| 2 ► See Chapter 01; Ques. 16 | 6 ► See Chapter 03; Ques. 26 | 10 ► See Chapter 06; Ques. 13 | 14 ► See Chapter 13; Ques. 09 |
| 3 ► See Chapter 02; Ques. 15 | 7 ► See Chapter 04; Ques. 10 | 11 ► See Chapter 07; Ques. 07 | 15 ► See Chapter 13; Ques. 17 |
| 4 ► See Chapter 02; Ques. 18 | 8 ► See Chapter 04; Ques. 19 | 12 ► See Chapter 07; Ques. 14 | |

Answering Reference ► Creative Questions

- | | | | |
|------------------------------|------------------------------|------------------------------|------------------------------|
| 1 ► See Chapter 01; Ques. 14 | 3 ► See Chapter 03; Ques. 13 | 5 ► See Chapter 06; Ques. 12 | 7 ► See Chapter 09; Ques. 02 |
| 2 ► See Chapter 02; Ques. 06 | 4 ► See Chapter 04; Ques. 10 | 6 ► See Chapter 07; Ques. 13 | 8 ► See Chapter 13; Ques. 16 |

 Model Test 04

Time : 3 hours

Annual Exam

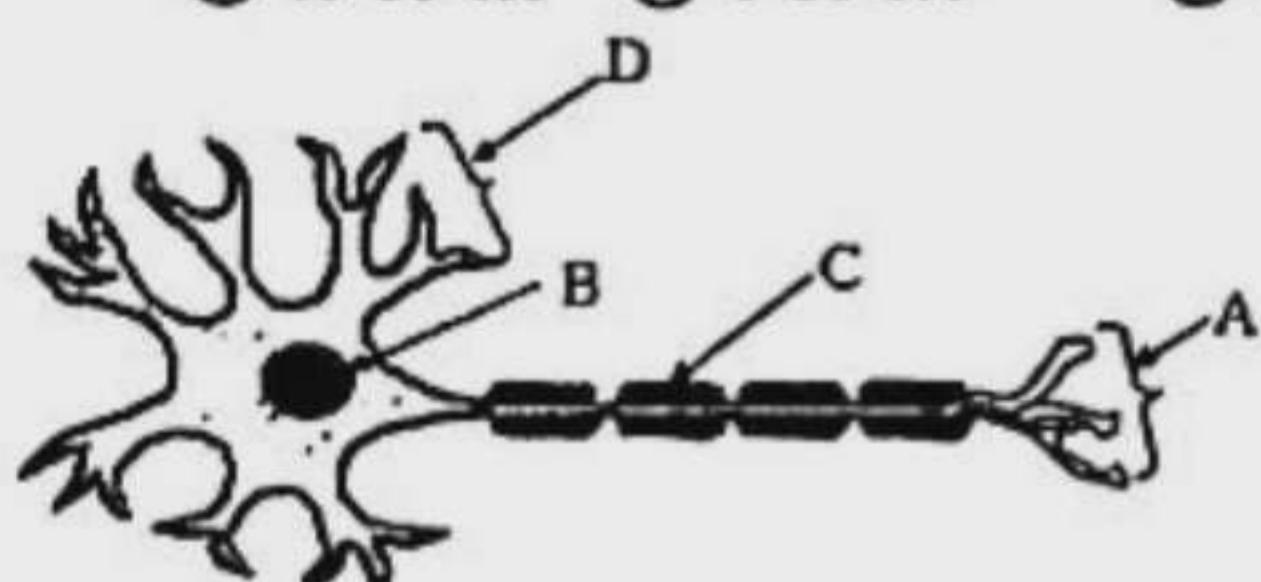
Science Class : Eight

Full marks : 100

 $1 \times 30 = 30$

[N.B. : Answer all the questions. Each question carries one mark. Block fully, with a ball-point pen, the circle of the letter that stands for the correct/best answer in the "Answer Sheet" for Multiple Choice Question Type Examination.]

1. Which cell of Obelia takes part in locomotion, defense and capture of prey?
 A Flame cell B Cnidoblast
 C Body D Gland
2. Which one is a cold-blooded animal?
 A Toad B Wall lizard
 C Swan D Magpie
3. Camel is an animal of which phylum?
 A Cnidaria B Nematoda
 C Echinodermata D Chordata
4. Which of the following is Chondrichthyes?
 A Ascidia B Sea horse
 C Sword fish D Petromyzon
5. At what stage the centromeres divide into two?
 A Pro-metaphase B Metaphase
 C Anaphase D Telophase
6. What stage is the very beginning of cell division?
 A Prophase B Interphase
 C Pro-metaphase D Anaphase
7. How many phases has karyokinesis been divided into?
 A 3 B 4 C 5 D 6
8. Telophase refers to—
 i. division of centromere
 ii. formation of daughter nucleus
 iii. end of karyokinesis
 Which one is correct?
 A i & ii B ii & iii C i & iii D i, ii & iii



Answer the question No. 9 and 10 in the light of above picture :

9. Which part is used to add one neurone to another?
 A D B C C B D A
10. In the above picture B is—
 i. round, oval or star shaped
 ii. composed of cell membrane, cytoplasm and nucleus
 iii. two types
 Which one is correct?
 A i & ii B ii & iii C i, ii & iii D i & iii
11. Which one of the following compounds is an artificial source of oxygen?
 A KClO_3 B CuCO_3 C $\text{Al}(\text{NO}_3)_3$ D AgNO_3
12. Which is the formula of quicklime?
 A Mg(OH)_2 B Al(OH)_3
 C Ca(OH)_2 D KOH
13. Which is the valency of carbon?
 A 1, 2 B 2, 3 C 2, 4 D 3, 4

14. How many atoms are there in one molecule of sulphuric acid?
 A 3 B 5 C 6 D 7
15. Which is the main element of producing soap?
 A Al(OH)_3 B Ca(OH)_2
 C NaOH D NH_4OH
16. Which one is mineral acid?
 A CH_3COOH B $\text{HOOC}-\text{COOH}$
 C NH_4OH D HClO_4
17. Which one is base?
 A NaOH B NH_4OH
 C Ca(OH)_2 D m Al(OH)_3
18. Characteristics of alkali is—
 i. they are slippery and bitter taste
 ii. they turn blue litmus paper to red in colour
 iii. they give OH^- ion in water
 Which one is correct?
 A i & ii B i & iii C ii & iii D i, ii & iii
19. Which one of the following parts determines the shape of the eyes?
 A Choroid B Retina
 C Sclera D Pupil
20. Which part of human eyes is translucent?
 A Retina B Pupil C Iris D Sclera
21. Which one of the following is of different colours?
 A etina B Iris
 C Pupil D Aqueous humour
22. Actually what is Sclera?
 A Cornea B Light sensitive membrane
 C Circular hole D Opaque covering
23. Which planet has 67 satellites?
 A Jupiter B Saturn C Uranus D Neptune
24. What is the next planet of earth in solar system?
 A Uranus B jupiter
 C Mars D Saturn
25. How many planets do not have any satellite?
 A five B four C three D two
26. How many natural satellites are there in the solar system?
 A 140 B 130 C 120 D 110
27. Which level of consumers the deer belongs to?
 A First B Second
 C Third D Omnivorous
28. Which is the secondary consumer in the Sundarbans?
 A Monkey, Crain B Deer, Hen
 C Tiger, Crocodile D Insect, Bird
29. Which one of the following is primary consumer of land ecology?
 A Man B Frog C Goat D Bird
30. Which one is tertiary consumer of Sundarbans?
 A Hogs B Cranes
 C Tortoise D Jackals



Short-Answer Question (Each question carries 2 marks)

SOMITA

 $2 \times 10 = 20$

Answer any 10 of the following questions :

- Write two differences between coelom and Haemocoel.
- Write the names of two animals of the phylum Chordata.
- In which stage of mitosis cell division do the chromosomes take positions at the poles?
- Where does meiosis occur?
- What is meant by the autonomic nervous system?
- Why is the pons called the connector of the brain?
- Mention the characteristics of a chemical reaction.

- What type of reaction is $Zn + S = ZnS$? Explain.
- Why does lemon juice not change the color of red litmus paper?
- Why is NaOH called a base?
- Write the laws of refraction of light.
- Why does a coin appear to float when it is dipped in water?
- Why is the moon not a part of the earth?
- Why are microorganisms called decomposers?
- How is food chain formed?

Creative Question (Each question carries 10 marks)

Answer any 5 of the following questions :

1.



Fig-X



Fig-Y



Fig-Z

- a. What is called classification? 1
b. Why crocodile is called reptilia? 2
c. In which class animal 'X' belongs to? Explain. 3
d. Though fig. 'Y' and 'Z' are the same kingdom but they stay in different phylum—Analyze with logic. 4
- Scene-1 : The increase of height and breadth of the body of animals and plant occur through the increase of the number of meristematic cells and somatic cells.
Scene-2 : Every animal gives birth to his offspring and through this their characteristics are expressed.
a. What is caryokinesis? 1
b. Why is the cell division occurs in the ovary of the flower Jaba called reduction division? 2
c. Describe in which cell division of the scene the increase of height and breadth of the body of animals and plants occurs. 3
d. To keep genetic trait which of the two scene plays the unquestionable role, analyze. 4
- During stitching katha, a needle pricks the skin of Mina's hand. She makes a sound 'uff'. Her elder brother said, "Be careful".
a. What is phytohormone? 1
b. Why the stem of plants bend towards the source of light? 2
c. Explain the incident of making sound by Mina. 3
d. How the speech of Mina's brother generate by a special system? Analyze. 4
- (i) $NaClO_3 \xrightarrow{\text{Heat}} NaCl + O_2$
 $Zn + O_2 \longrightarrow ZnO$
a. What is lime water? 1
b. $Cu(OH)_2$ is only base, its not alkali.—Explain. 2
c. Before and after the reaction no. (1), the atom numbers will be equal.—Prove it. 3
d. Give a comparative discussion between the reaction no. (1) and (2). 4

- Soumita took two beakers and put sodium hydroxide in one beaker and vinegar in the other beaker. She put a piece of red litmus paper in the solutions of the two beakers and observed the change of colour.

- a. What is indicator? 1
b. Why do green mangoes taste sour? 2
c. Write the result of Soumita's observation. 3
d. The use of one of the two solutions observed by Soumita is more important in our everyday life. Analyse. 4

6.

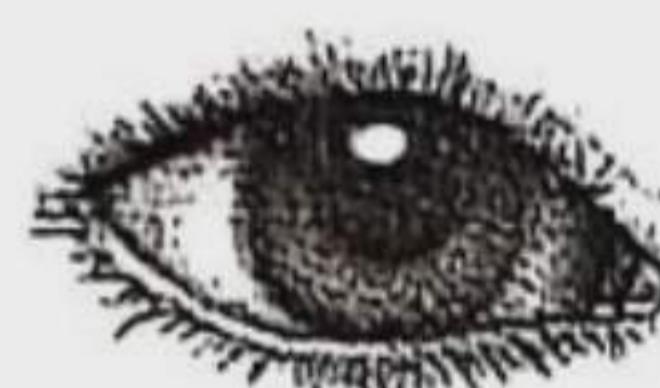


Figure-1

Figure-2

- a. What is optical fibre? 1
b. What do you mean by critical angles? 2
c. Describe the function of figure-1 3
d. Which function is similar with figure '2'? Describe the structure and function of the diagram. 4
- 'X'-Human launched satellite.
'Y'- The satellite of earth.
a. What is Milky-way? 1
b. Explain the incident of Big Bang. 2
c. Describe the spin motion of satellite 'Y'. 3
d. What is die role of the satellite 'X' in human life? Analyze. 4
- Algae → Small aquatic being → Puti fish → Big fish
a. What is consumer? 1
b. Why is a bacteria called decomposer? 2
c. Using the living being mentioned in the stem, draw a figure of aquatic ecosystems. 3
d. How would the increase in number of small fishes mentioned in the stem influence the ecosystem? Analyze. 4

 Answer Sheet ► Multiple Choice Questions

1	(b)	2	(a)	3	(d)	4	(c)	5	(c)	6	(b)	7	(c)	8	(d)	9	(d)	10	(a)	11	(a)	12	(c)	13	(c)	14	(d)	15	(c)
16	(a)	17	(d)	18	(b)	19	(c)	20	(a)	21	(b)	22	(d)	23	(a)	24	(c)	25	(a)	26	(a)	27	(a)	28	(c)	29	(c)	30	(a)

 Answering Reference ► Short-Answer Questions

- | | | | |
|------------------------------|------------------------------|-------------------------------|-------------------------------|
| 1 ► See Chapter 01; Ques. 19 | 5 ► See Chapter 05; Ques. 17 | 9 ► See Chapter 10; Ques. 03 | 13 ► See Chapter 12; Ques. 16 |
| 2 ► See Chapter 01; Ques. 26 | 6 ► See Chapter 05; Ques. 24 | 10 ► See Chapter 10; Ques. 11 | 14 ► See Chapter 14; Ques. 15 |
| 3 ► See Chapter 02; Ques. 19 | 7 ► See Chapter 08; Ques. 09 | 11 ► See Chapter 11; Ques. 03 | 15 ► See Chapter 14; Ques. 25 |
| 4 ► See Chapter 02; Ques. 23 | 8 ► See Chapter 08; Ques. 14 | 12 ► See Chapter 11; Ques. 06 | |

 Answering Reference ► Creative Questions

- | | | | |
|------------------------------|------------------------------|------------------------------|------------------------------|
| 1 ► See Chapter 01; Ques. 05 | 3 ► See Chapter 05; Ques. 05 | 5 ► See Chapter 10; Ques. 07 | 7 ► See Chapter 12; Ques. 03 |
| 2 ► See Chapter 02; Ques. 10 | 4 ► See Chapter 08; Ques. 03 | 6 ► See Chapter 11; Ques. 08 | 8 ► See Chapter 14; Ques. 05 |

 Model Test 05

Time : 3 hours

Annual Exam

Science Class : Eight

Full marks : 100

 $1 \times 30 = 30$

[N.B. : Answer all the questions. Each question carries one mark. Block fully, with a ball-point pen, the circle of the letter that stands for the correct/best answer in the "Answer Sheet" for Multiple Choice Question Type Examination.]

1. Which phylum is divided into to different sub-kingdom?
 A Porifera B Platyhelminthes
 C Protozoa D Mollusca
2. The animals of which phylum are known as sponge?
 A Nematoda B Cnidaria
 C Annelida D Porifera
3. Which of the following absorbs ions?
 A Rock salt B Water
 C Carbohydrate D Zilletine
4. How many phylum of invertebrate animal?
 A 3 B 7 C 8 D 9
5. At which stage the shapes of chromosomes look like V, L, J or I in mitosis cell division?
 A Prophase B Metaphase
 C Anaphase D Telophase
6. How many daughter cells will produce from three mother cells in mitosis cell division?
 A 3 B 5 C 6 D 12
7. In which stage the centromere of the chromosome is divided into two parts?
 A Prophase B Metaphase
 C Anaphase D Telophase
8. How many types of nucleic acid are there?
 A 1 B 2 C 3 D 4
9. The capabilities Tapu has not lost—
 i. vision ii. hearing
 iii. respiration
 Which one is correct?
 A i & ii B i & iii C ii & iii D i, ii & iii
10. Which one is absent in neurone cell?
 A Cell membrane B Cytoplasm
 C Nucleus D Centriole
11. Which of the following does awaken the feeling of vision of the brain?
 A Retina B Iris
 C Choroid D Sclera
12. How many parts does the central nervous system have?
 A Five B Four C Three D Two
- Look at the stem carefully and answer the questions no. 13 and 14 :

$$\text{CuCO}_3 \xrightarrow{\text{heat}} \text{A} + \text{CO}_2$$
13. In the 'A' marked position of the equation, there is—
 A Cu B O₂ C Cu₂O D CuO
14. What type of stem's reaction is?
 A Addition B Decomposition
 C Substitution D Combustion

15. Which kind of fruits contain oxalic acid?
 A Tamato B Emblica
 C Pineapple D Grape
16. Malic acid is available in—
 A Tamarind B Amloki
 C Pineapple D Orange
17. Which of the following is main component of Soap?
 A Ca(OH)₂ B NaOH
 C NH₄OH D Mg(OH)₂
18. Which acid is present in tomato?
 A Citric B Oxalic
 C Ascurbic D Malic
19. The front part of the sclera is called—
 A cornea B iris C pupil D retina
20. What is the colour of retina of eye?
 A rose B brown C blue D black
21. In which of the following the colour is different due to place and man?
 A Iris B Moni C Retina D Cornea
22. How many main parts are there of a human eye?
 A 12 B 10 C 9 D 8
23. Which planet lies nearest to the sun?
 A the Venus B the Mercury
 C the Saturn D the Mars
24. How many satellites does the Saturn have?
 A 13 B 27 C 34 D 43
25. Which planet ranks the third position with respect to the number of satellites?
 A the Uranus B the Neptune
 C the Jupiter D the Saturn
26. Which planet has 27 satellites?
 A Jupiter B Saturn
 C Uranus D Neptune
27. Which one is secondary consumer?
 A Spotted deer B Hogs
 C Jackal D Crocodile
28. Which one is the physical element of ecosystem?
 A khudepana B light
 C bird D fungi
29. Primary consumer is—
 i. man ii. cow iii. goat
 Which one is correct?
 A i & ii B i & iii C ii & iii D i, ii & iii
30. Which omnivore can you find in the Sundarbans?
 A tiger B hog C jackal D crane



Short-Answer Question (Each question carries 2 marks)

SUNTA

2 × 10 = 20

Answer any 10 of the following questions :

- Write two characteristics of the phylum Mollusca.
- Why is man called a Chordata phylum animal?
- Briefly describe the aster rays.
- What are the parts of a chromosome?
- How many parts are there in each reflex cycle? Mention them.
- Why is it important to remove waste products from the body?
- What is a chemical equation? Explain with an example.
- What is meant by combustion reaction?

- Q9. Why are grapes sour in taste?
Q10. Write two properties of acid.
Q11. When are the angle of incidence and angle of refraction equal?
Q12. Why do the stones in the clear water of the Sera Island seem to be much higher?
Q13. How are satellites created?
Q14. Why is the Earth observation satellite important in the field of environment?
Q15. Write two characteristics of Sundarban region.

Creative Question (Each question carries 10 marks)

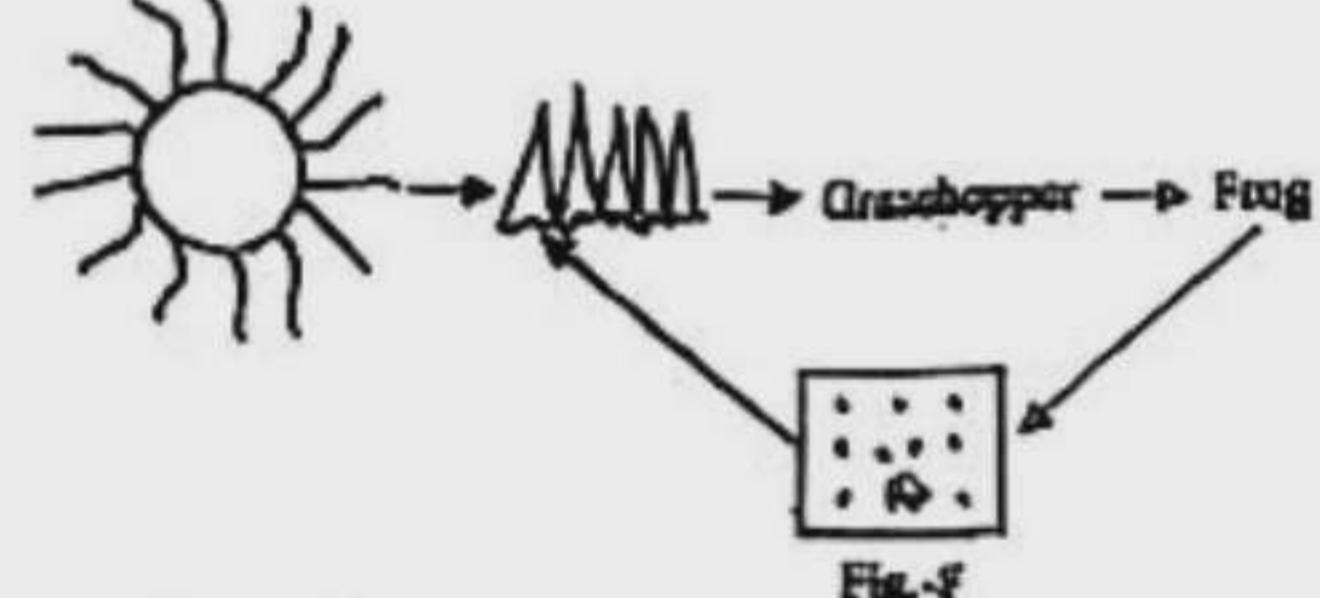
Answer any 5 of the following questions :

10 × 5 = 50

- 


- a. What is called binomial? 1
b. Why Frog is called amphibia? 2
c. Which phylum the figure-A belongs to—Explain. 3
d. Are the animals belong to same phylum in figure 'B' and figure 'C'? Give your opinion with logic. 4
- Ayesa is a student of class eight and she looks like her mother. A cell division picture is hanging on the wall and the chromosome of that picture looks English alphabet.
a. What is called interphase? 1
b. Why the cell division of amoeba called direct cell division? 2
c. Explain with level diagram of the picture that is hanging on the wall in Ayesa's room. 3
d. Justify why Ayesa looks like her mother. 4
- The children fear from fire. And it feel pain to push pin. Its give up unwanted waste by stool and urine. These are occur reflexive system.
a. What is cerebellum? 1
b. Explain what type of hormone is ethylene. 2
c. How does the system mentioned in the stem act? 3
d. Explain the action mentioned in the stem. 4
- (i) $\text{Fe} + \text{H}_2\text{SO}_4 \rightarrow \text{FeSO}_4 + \text{H}_2$
(ii) $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$
(iii) $\text{CuCO}_3 \xrightarrow{\text{heat}} \text{CuO} + \text{CO}_2$
a. What is lime water? 1
b. Why is a litmus paper called indicator? 2
c. Explain the reaction no (ii). 3
d. Are the reactions no, (i) and (iii) of same type? Explain with logic. 4
- (i) $\text{A} + \text{ZnO} \rightarrow \text{ZnSO}_4 + \text{H}_2\text{O}$
(ii) $\text{A} + \text{KOH} \rightarrow \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
a. What is called base? 1
b. Why methane is not an acid? 2

- c. Explain the uses of the 'A' marked compound. 3
d. Explain the comparative analysis in between the reactants of the reaction (ii). 4
- Q10. When Sagar bring kerosene by a glass bottle, he observed that, the lower part of the bottle looking slightly thick and upward than before. To find out the above when he entered the long stick inside it, then it looks bent.
a. What is refraction of light? 1
b. Explain the importance of optical fibre in the telecommunication process. 2
c. Explain the reason for which the thickness and looking upward of the end point of the bottle seen by Sagar. 3
d. Is there any similarity in between the above stem's two phenomenon on the basis of the differences of medium and density? Analyze it. 4
- Q7. "There are two types of satellites" — Teacher said when he explained about the satellites in his science class. One is artificial satellites — "Plays many important role for the mankind". Second one is natural satellites.
a. What is Galaxy? 1
b. Explain the Big Bang Theory. 2
c. How can the second satellite revolves around the earth? Explain it. 3
d. Analyze the teacher's comment for the first satellite. 4

- Q8. 
a. What is producer? 1
b. Explain the reason behind fungi being called decomposer. 2
c. Explain the food chain of above figure. 3
d. Why the energy flow of figure-'F' is unidirectional? Analyze. 4

 Answer Sheet ► Multiple Choice Questions

1	C	2	D	3	D	4	C	5	C	6	C	7	C	8	B	9	D	10	D	11	A	12	D	13	D	14	B	15	A
16	C	17	B	18	B	19	A	20	A	21	A	22	C	23	B	24	C	25	A	26	C	27	C	28	B	29	C	30	B

 Answering Reference ► Short-Answer Questions

- 1 ► See Chapter 01; Ques. 21
2 ► See Chapter 01; Ques. 27
3 ► See Chapter 02; Ques. 20
4 ► See Chapter 02; Ques. 26
- 5 ► See Chapter 05; Ques. 25
6 ► See Chapter 05; Ques. 30
7 ► See Chapter 08; Ques. 10
8 ► See Chapter 08; Ques. 15
- 9 ► See Chapter 10; Ques. 04
10 ► See Chapter 10; Ques. 12
11 ► See Chapter 11; Ques. 07
12 ► See Chapter 11; Ques. 09
- 13 ► See Chapter 12; Ques. 18
14 ► See Chapter 12; Ques. 22
15 ► See Chapter 14; Ques. 18

 Answering Reference ► Creative Questions

- 1 ► See Chapter 01; Ques. 12
2 ► See Chapter 02; Ques. 12
- 3 ► See Chapter 05; Ques. 10
4 ► See Chapter 08; Ques. 02
- 5 ► See Chapter 10; Ques. 11
6 ► See Chapter 11; Ques. 10
- 7 ► See Chapter 12; Ques. 07
8 ► See Chapter 14; Ques. 07

 Model Test 06

Time : 3 hours

 Annual Exam

Science Class : Eight

Full marks : 100

 $1 \times 30 = 30$

[N.B. : Answer all the questions. Each question carries one mark. Block fully, with a ball-point pen, the circle of the letter that stands for the correct/best answer in the "Answer Sheet" for Multiple Choice Question Type Examination.]

1. Which is the largest phylum in animal kingdom?
 A Porifera B Mollusca
 C Arthropoda D Chordata
2. Which phylum does *Obelia* belong to?
 A Cnidaria B Platyhelminthes
 C Nematoda D Annelida
3. Which cells help in the activities like capture of prey, defense, locomotion?
 A Flame B Cnidoblast
 C Body D Gland
4. Which animal has haemocoel?
 A Hilsha B Pabda C Shark D Prawn
5. In which stage of cell division nucleolus almost disappears?
 A Prophase B Pro-metaphase
 C Metaphase D Anaphase
6. Amitosis does not take place in —.
 A yeast B fungi
 C bacteria D euglena
7. What does somatic cell produce?
 A Gamete B Zygote C Pollen D Cuticle
8. Where does mitosis take place in plants?
 A Root end B Tender leaf
 C Bud D All the above
9. What is the largest part of the brain?
 A Cerebrum B Cerebellum
 C Pons D Medulla
10. Which part of the brain remains almost in a hanging position?
 A Medulla B Pons
 C Diencephalon D Cerebellum
11. Which one is the longest cell of the human body?
 A Neurone B Dendron
 C Axon D Cell body
12. Why neurone cell can not divide?
 A No mitochondria B No centriole
 C No nucleus D No centromere
13. Which compound is called blue Vitriol?
 A NH_4Cl B $\text{Fe}_2(\text{SO}_4)_3$
 C CuSO_4 D $\text{Fe}(\text{NO}_3)_2$
14. Which of the following compounds is edible?
 A NaHCO_3 B H_2SO_4 C NH_4Cl D MnO_2
15. What does a lemon contain?
 A MgO B Al(OH)_3 C $\text{C}_6\text{H}_8\text{O}_7$ D ZnSO_4
16. Which is electrolyte material?
 A Sugar B Oil C Salt D Glucose
17. Which of the following is non-electrolyte?
 A Sugar B Tabic salt
 C Tunte D Citric acid

18. Which one of the following is a salt?
 A Ca(OCl)Cl B $\text{C}_{17}\text{H}_{35}\text{COONa}$
 C $\text{Al}(\text{NO}_3)_3$ D NH_4OH
19. Which one of the following is an acid?
 A HOOC - COOH B NaHCO_3
 C Ca(OCl)Cl D KClO_3
20. What is the main ingredient of soap?
 A KOH B NaOH C K_2CO_3 D Na_2CO_3
21. Which base does not dissolve in water?
 A NaOH B $\text{Ca}(\text{OH})_2$
 C $\text{Al}(\text{OH})_3$ D NH_4OH
22. Read the following passage and answer the two questions :

Shaymol went to the doctor for his different difficulties. In that time, doctor use an special type flexible tube to examine his stomach and colon.
23. By which, the special type of tube is prepared?
 A Silicon B Glass
 C Polymer D Plastic
24. In the thintube—.
 - i. The ray passes easily
 - ii. Total interval reflection is occurred
 - iii. Can carry much more information at a time

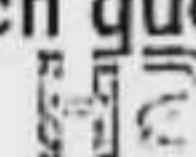
Which one is correct?
25. A i & ii B i & iii C ii & iii D i, ii & iii
26. What is the speed of light?
 A $3 \times 10^8 \text{ ms}^{-1}$ B $3 \times 10^9 \text{ ms}^{-1}$
 C $0.3 \times 10^8 \text{ ms}^{-1}$ D $0.03 \times 10^8 \text{ ms}^{-1}$
27. What is the approximate time sunlight need to reach the earth's surface?
 A 500 sec B 520 sec C 560 sec D 570 sec
28. What is the colour of the biggest stars?
 A Red B Blue C Yellow D Indigo
29. How many satellites does the farthest planet have?
 A 36 B 27 C 13 D 02
30. What percentage of sunlight is used by green plants in the photosynthesis process?
 A 1 B 2 C 3 D 4
31. By green plants, the solar energy transforms into which energy?
 A Chemical energy B Heat energy
 C Mechanical energy D Light energy
32. Ecosystem is a —.
 - i. self-conditioning unit
 - ii. self-regulating unit
 - iii. self-sufficient unit

Which one of the following is correct?
33. A i & ii B ii & iii C i & iii D i, ii & iii



Short-Answer Question (Each question carries 2 marks)**Answer any 10 of the following questions :**

1. How many sub-phyla of the phylum Chordata are there and what are they?
2. Write two differences between shark and hilsa fish.
3. How is the cell wall formed?
4. Write two differences between DNA and RNA.
5. Why is reflex action called a coordinated activity?
6. Why is the kidney compared to a sieve?
7. How are the reactants and products represented in a chemical equation?

 $2 \times 10 = 20$

8. What is meant by energy change in a chemical reaction?
9. Write two differences between acid and base.
10. Mention the uses of acid and base as cleaning agents.
11. Explain the critical angle.
12. Why is optical fibre used in telecommunications?
13. Write the names of two artificial satellites.
14. Write two differences between food chain and food web.
15. Write two characteristics of energy flow in ecosystem.

Creative Question (Each question carries 10 marks)**Answer any 5 of the following questions :**

1.
 a. What is coelenteron? 1
 b. Why sea cucumber is called radial symmetry animal? Explain. 2
 c. Explain the characteristics of animal 'P'. 3
 d. Though the animals 'Q' and 'R' are belong to same sub-phylum but they are not belong to same class—why? Give logic. 4
 2. X—Ending of Karyokinesis.
 Y—Chromosomes divide once, nucleus divides twice.
 a. What is DNA? 1
 b. Why the colour of Mitu's eyes is similar to the colour of her grandmother's eyes? 2
 c. Explain the phase 'X'. 3
 d. How the hereditary trait is maintained by 'Y'? Analyze it. 4
 3.

Kidney	Neuron
--------	--------

Q	R
---	---

 a. What is nerve impulse? 1
 b. What do you mean by tropic movement? 2
 c. "The organ 'Q' of the stem is the factory of preparing urine."—Explain it. 3
 d. If the organ 'R' of the stem does not work properly, in that time what type of problems are occurred in the human body? Give your logic. 4
 4. (i) $2\text{KClO}_3 \xrightarrow{\text{Heat}} 2\text{KCl} + 3\text{O}_2$
 (ii) $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$
 a. How many atoms are in the compound $3\text{Al}_2(\text{SO}_4)_3$? 1
 b. What do you mean by chemical equation? 2
 c. What type of reaction is No. (i)? Explain it. 3
 d. Are the two reactors of the reaction No. (ii) same? Give your opinion with comparative details. 4
 5. Baking soda + Vinegar \rightarrow Sodium acetate + $\text{CO}_2 + \text{H}_2\text{O}$.
 a. What is formula? 1
 b. Why is isotope used in agriculture? 2
 c. Of what type is the reaction mentioned in the stem? 3
- $10 \times 5 = 50$
6.
 a. In the reaction mentioned in the stem, the second reactant compound and the produced first compound are of same nature—Analyze. 4
 7.
 a. What is refraction of light? 1
 b. What do you mean by total internal reflection? 2
 c. Explain the incident of figure 'A'. 3
 d. Discuss the real application of figure 'A'. 4
 8.
 a. What is outer space? 1
 b. Why can we know the news of rainfall, wind and cyclone of the next days? 2
 c. Describe the method of revolving of the figure Y in the orbit. 3
 d. "Among the members of 'S' family" the number of satellites of P is fewer.—Analyse. 4
 9.
 a. Phytoplankton → Zooplankton → Small fish → Frog → Snake → Eagle.
 b. Grass → Deer → Tiger.
 a. What is zooplankton? 1
 b. What do you mean by ecosystem? Explain it. 2
 c. Explain the no. (i) ecosystem. 3
 d. Ecosystem (ii) plays an important role in maintaining balance of nature. — Give your opinion logically. 4

Answer Sheet ► Multiple Choice Questions

1	C	2	A	3	B	4	D	5	B	6	D	7	A	8	D	9	A	10	D	11	A	12	B	13	C	14	A	15	C
16	C	17	A	18	C	19	A	20	B	21	C	22	D	23	D	24	A	25	A	26	B	27	C	28	D	29	A	30	D

Answering Reference ► Short-Answer Questions

- 1 ► See Chapter 01; Ques. 24 5 ► See Chapter 05; Ques. 28 9 ► See Chapter 10; Ques. 16 13 ► See Chapter 12; Ques. 19
 2 ► See Chapter 01; Ques. 31 6 ► See Chapter 05; Ques. 34 10 ► See Chapter 10; Ques. 23 14 ► See Chapter 14; Ques. 26
 3 ► See Chapter 02; Ques. 21 7 ► See Chapter 08; Ques. 11 11 ► See Chapter 11; Ques. 12 15 ► See Chapter 14; Ques. 31
 4 ► See Chapter 02; Ques. 27 8 ► See Chapter 08; Ques. 22 12 ► See Chapter 11; Ques. 17

Answering Reference ► Creative Questions

- 1 ► See Chapter 01; Ques. 09 3 ► See Chapter 05; Ques. 11 5 ► See Chapter 10; Ques. 04 7 ► See Chapter 12; Ques. 06
 2 ► See Chapter 02; Ques. 08 4 ► See Chapter 08; Ques. 08 6 ► See Chapter 11; Ques. 04 8 ► See Chapter 14; Ques. 11