MAHARASHTRA BOARD · CLASS 10 · SCIENCE AND TECHNOLOGY PART 2

Maharashtra Board Class 10 Science and Technology Part 2 Important Questions 2027

Scan for the online version

34 question patterns that repeated across past papers · the years show every time each was asked

More free papers, important questions & topics: guesspaper.app/maharashtra-board/class-10/science-and-technology-part-2/important-questions/

Heredity and Evolution

1. MCQ: mutation / Hugo de Vries theory

Asked 3× · Board 2024, Board 2025, Board 2026 · 1 marks

The causality behind the sudden changes was understood due to ..... principle of Hugo de Vries. (A) Appendix (B) Mutation (C) Transcription (D) Translocation

2. Vestigial organs: define + examples in humans and animals

Asked 3× · Board 2024, Board 2025 · 3 marks

(a) Define vestigial organs. (b) Write names of any two vestigial organs in human body. (c) Write the names of any two vestigial organs which are non-functional in human beings but functional in other organisms.

3. Definition of evolution as gradual change

Asked 2× · Board 2024, Board 2025 · 1 marks

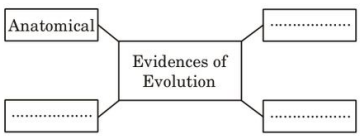
State whether the following statement is True or False: Evolution is the gradual change occurring in living organisms over a long duration.

4. Complete diagram: evidences of evolution

Asked 2× · Board 2022, Board 2026 · 2/3 marks

Complete the following diagram: Evidences of Evolution - Anatomical, ... (complete the remaining evidences).

(i) Complete the following diagram :



(ii) Explain the process of glycolysis.

Life Processes in Living Organisms Part 1

5. Protein and its organ/gland (table or correlation)

Asked 3× · Board 2023, Board 2024, Board 2026 · 1/2/3 marks

Complete the table: Sr.No | Protein | Name of Organ. (1) ..... - Bones (2) Insulin - .....

6. Stages of karyokinesis / mitosis

Asked 2× · Board 2025, Board 2026 · 3 marks

Name the type of cells in which mitosis occur? Write four stages of karyokinesis.

7. Scientific reason: fibres are an important nutrient

Asked 2× · Board 2024, Board 2025 · 2 marks

Give scientific reason: Fibres are one of the important nutrients.

8. Scientific reason: higher plants/animals do anaerobic respiration

Asked 2× · Board 2023, Board 2025 · 2 marks

Give scientific reason: Sometimes, higher plants and animals too perform anaerobic respiration.

9. Vitamins: definition and types/classification

Asked 2× · Board 2022, Board 2024 · 2/3 marks

(a) What are vitamins? (b) Classify them according to their solubility. (c) Give one example of each type as per above classification.

Life Processes in Living Organisms Part 2

10. Distinguish sexual vs asexual reproduction

Asked 3× · Board 2022, Board 2024, Board 2025 · 2/3 marks

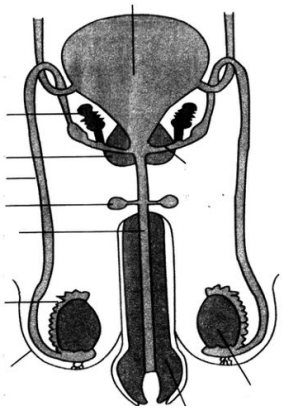
Distinguish between Sexual reproduction and Asexual reproduction.

11. Male reproductive system: sub-questions

Asked 2× · Board 2024, Board 2026 · 5 marks

[context: diagram of human reproductive system] Observe the diagram given below and answer: (1) Write the name of the reproductive system in the above diagram. (2) Name any two glands in the above diagram. (3) Mention any one duct in the above system. (4) What is the length of a sperm? (5) Which hormone is secreted by the testes?

(*ii*) Observe the diagram given below and answer the questions :

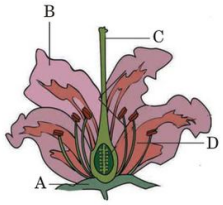


12. Flower structure: label whorls/parts

Asked 2× · Board 2022, Board 2026 · 5 marks

[context: flower diagram with parts A, B, C, D] Observe the diagram and answer: (a) Label the parts A, B, C, D shown in above diagram. (b) Write name of any one type of whorl. (c) Write any two components of Androecium. (d) Write any two components of Gynoecium.

(*i*) Observe the diagram and answer the questions :



(*a*) Label the parts A, B, C, D shown in above diagram.

13. Identify animal that regenerates (starfish)

Asked 2× · Board 2023, Board 2025 · 1/3 marks

Which of the following animals can regenerate its broken body part? (A) Cockroach (B) Frog (C) Sparrow (D) Starfish

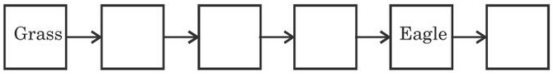
Environmental Management

14. Complete / reorganize a food chain

Asked 2× · Board 2025, Board 2026 · 1/2 marks

Complete the following food chain.

(*i*) Complete the following food chain :



(*ii*) Distinguish between the following :

15. Short note on environmental conservation

Asked 2× · Board 2023, Board 2026 · 2/3 marks

Write a short note on environmental conservation.

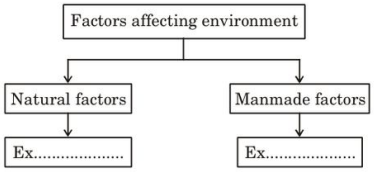
16. Factors affecting environment

Asked 2× · Board 2023, Board 2026 · 2/3 marks

Complete the concept map: Factors affecting environment - Natural factors (Ex. .....), Manmade factors (Ex. .....).

(*i*) Distinguish between Aerobic respiration and Anaerobic respiration.

(*ii*) Complete the concept map :



(*iii*) Write the correct word in the blank spaces :

17. MCQ: classify a threatened species / example

Asked 2× · Board 2022, Board 2024 · 1 marks

One of the rare species is ..... (A) Lesser florican (B) Red panda (C) Tiger (D) Shekhru

18. Explain environmental-conservation symbols

Asked 2× · Board 2022, Board 2024 · 3 marks

What is the meaning of the following symbols? Write your role accordingly. [context: recycle/reduce waste symbol, green-energy plug symbol, bicycle symbol]

accordingly.



Towards Green Energy

19. Scientific reason: hydro/solar/wind are renewable

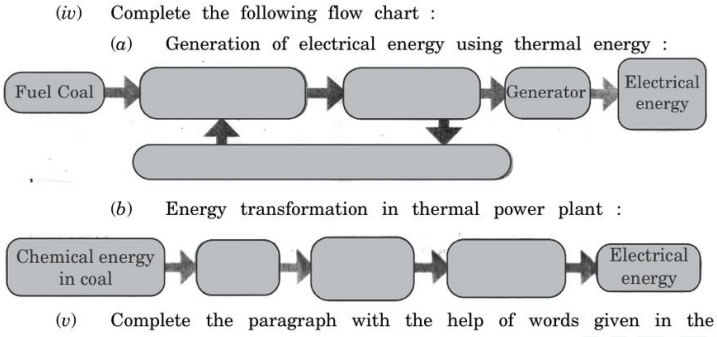
Asked 3× · Board 2024, Board 2025 · 2 marks

Give scientific reason: Hydroelectric energy, solar energy and wind energy are called renewable energies.

20. Flow chart: energy transformation in power plants

Asked 2× · Board 2025, Board 2026 · 3/5 marks

Complete the following flow chart: (a) Generation of electrical energy using thermal energy - Fuel Coal. (b) Energy transformation in thermal power plant - Chemical energy in coal -> Electrical energy.



21. Fuel of thermal power plant + problems

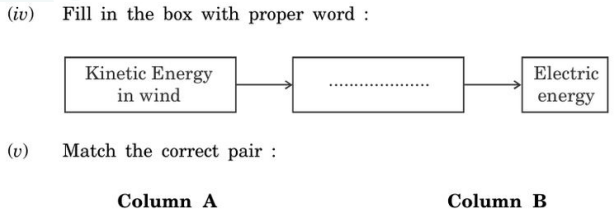
Asked 2× · Board 2025, Board 2026 · 3 marks

Which fuel is used in thermal power plant? What are the problems associated with this type of power generation?

22. Wind-energy transformation stages/flow

Asked 2× · Board 2022, Board 2025 · 1/3 marks

Fill in the box with proper word: Kinetic Energy in wind -> ..... -> Electric energy.

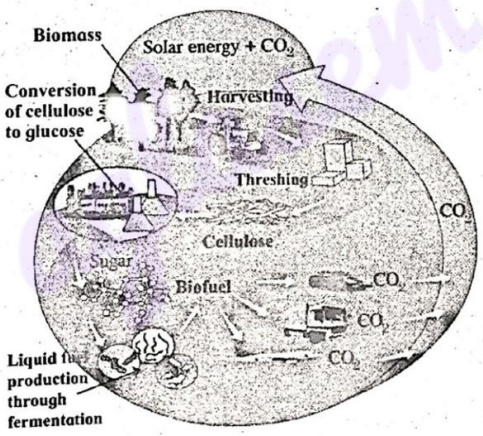


23. Fuels obtained from biomass

Asked 2× · Board 2022, Board 2023 · 3 marks

[context: diagram of biofuel/biomass cycle - Solar energy+CO2, Biomass, cellulose to glucose, biofuel, fermentation] (1) Which process is shown in the above given picture? (2) Give two examples for liquid fuels and solid fuels obtained by this process.

(vii)



Animal Classification

24. Class of bat (Mammalia)

Asked 2× · Board 2023, Board 2026 · 1 marks

Bat is included in class ..... (A) Amphibia (B) Reptilia (C) Aves (D) Mammalia

Introduction to Microbiology

25. MCQ: vinegar is acetic acid

Asked 2× · Board 2024, Board 2025 · 1 marks

Vinegar contains ..... acid. (A) acetic (B) lactic (C) tartaric (D) hydrochloric

26. Cheese production: microbes and enzymes

Asked 2× · Board 2022, Board 2025 · 3 marks

Complete the paragraph with the help of words given in the bracket (Lactobacillus cremoris, Protease, Cow, Vegetarian, microbiological, rennet, Geobacter, Saccharomyces): Cheese is produced on large scale from the abundantly available ..... milk all over the world. First chemical and ..... tests of milk are performed. Some colours and microbes like Lactobacillus lactis, ... and Streptococcus thermophilus are mixed with milk. It imparts sourness to the milk. After this, to impart the dense texture, whey needs to be removed. An enzyme ..... obtained from alimentary canal of cattle was being traditionally used earlier. However an enzyme ..... obtained from fungi is used at present to produce ..... cheese.

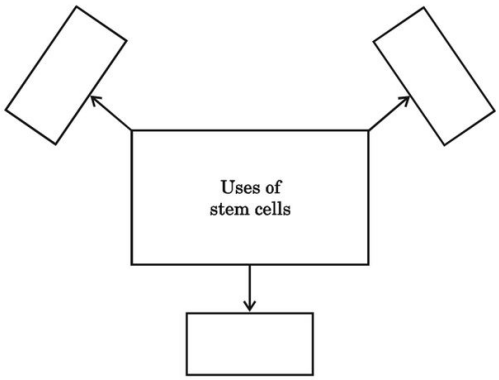
Cell Biology and Biotechnology

27. Stem cells: definition / uses

Asked 4× · Board 2023, Board 2024, Board 2025, Board 2026 · 2/3/5 marks

Complete the following conceptual picture and write its uses in treatment of various diseases. [context: stem cells]

(*vii*) Complete the following conceptual picture and write its uses in treatment of various diseases :



(*viii*) Which are *three* objectives of disaster management ?

28. Commercial uses / benefits of biotechnology

Asked 3× · Board 2024, Board 2025, Board 2026 · 1/2 marks

Give two commercial applications of Biotechnology.

29. Correlation: interferon / cancer treatment

Asked 2× · Board 2023, Board 2025 · 1 marks

Write the correct co-relation: Diabetes : Insulin : : Cancer : .....

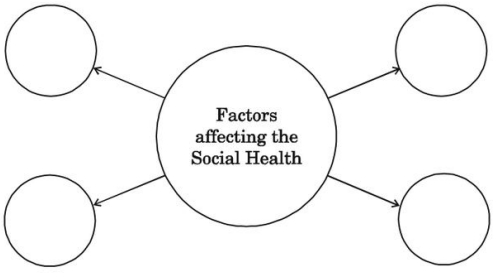
Social Health

30. Factors affecting social health

Asked 2× · Board 2024, Board 2026 · 2/5 marks

Redraw and complete the given chart: Factors affecting the Social Health.

(*ii*) Redraw and complete the given chart.

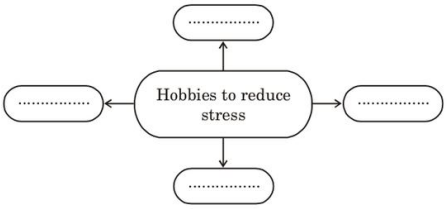


31. Hobbies to reduce stress

Asked 2× · Board 2024, Board 2026 · 2/3 marks

Write the correct word in the blank spaces: Hobbies to reduce stress - ..... (four boxes).

(iii) Write the correct word in the blank spaces :



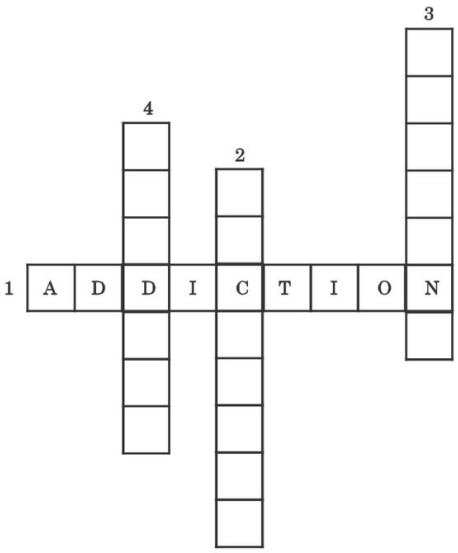
(iv) Write any *two* objectives of disaster management

32. Crossword on social health (ADDICTION)

Asked 2× · Board 2023, Board 2025 · 3/5 marks

Solve the following crossword: (1) Continuous consumption of alcoholic and tobacco materials. (2) This app may cause cyber crimes. (3) A remedy to resolve stress. (4) Requirement for stress free life.

(vii) Solve the following crossword :



(1) Continuous consumption of alcoholic and tobacco materials.

(2) This app may cause cyber crimes.

Disaster Management

33. Objectives of disaster management

Asked 4× · Board 2023, Board 2024, Board 2025, Board 2026 · 2/3 marks

Write any two objectives of disaster management.

34. Materials in a first aid box

Asked 2× · Board 2024, Board 2026 · 3 marks

Write the names of any six materials in first aid box.