

### **BIOLOGY**

### **BOOKS - NIKITA PUBLICATION**

## **Living World**

Example

1. Enlist the characters of living organisms.



2. Which features can be considered as all inclusive characteristics of life? Why?



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3. What is reproduction?



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4. What is growth?



**5.** Define response to Stimuli/Irritability.



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**6.** What is herbarium?



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7. What is museums?



8. Each character of couplet is known as......



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**9.** Key is based on set of contrasting character known as......



**10.** Linnaeus is considered as Father of Taxonomy. Name two other botanists known for their contribution to the field of plant taxonomy.



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11. What does ICZN stand for?



12. Couplet in taxonomic key means......



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**13.** What is a Monograph?



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**14.** Amoeba multiplies by miotic cell division. Is this phenomena growth or reproduction? Explain.

15. Define metabolism.



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**16.** Which is the largest botanical garden in the world? Name a few well known botanical gardens in India.



**17.** Whether all organisms are similar? Justify your answer.



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**18.** Can metabolic reactions demonstrated in a test tube (called 'in vitro' test) be called living?



**19.** Now a days patients are declared 'brain dead' and are on life support. They do not show any sign of self-consciousness. Are they living or non-living?



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**20.** How can we study large number of organisms at a glance?



**21.** Whether all organisms prepare their own food?



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**22.** What are the essentials of a good herbarium?



**23.** Why should we visit botanical gardens, museum and zoo?



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**24.** Riya found peculiar plant on her visit to Himachal Pradesh. What are the ways she can show it to her biology teacher and get information about it?



**25.** At Andaman, authorities do not allow tourists to collect shells from beaches. Why it must be so?



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**26.** Why do we have green house in botanical gardens?



**27.** Role of human being in biodiversity conservation.



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28. Give importance of Botanical Gardens.



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29. A ball of snow when rolled over snow increases in mass, volume and size. Is this

comparable to growth as seen in living organisms? Why?



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**30.** In a given habitat we have 20 plant species and 20 animal species. Should we call this as 'diversity' or 'biodiversity'? Justify your answer.



31. International Code of Botanical nomenclature (ICBN) has provided a code for classification of plants. Give hierarchy of units of classification botanists follow while classifying plants and mention different 'Suffixies' used for the units.



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**32.** A plant species shows several morphological variations in response to

altitudinal gradient. When grown under similar conditions of growth, the morphological variations disappear and all the variants have common morphology. What are these variants called?



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**33.** How do you prepare your own herbarium sheets? What are the different tools you carry with you while collecting plants for the preparation of a herbarium? What information

should a preserved plant material on the herbarium sheet provide for taxonomical studies?



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34. What is the difference between flora, fauna and vegetation? Eichhornia crassipes is called as an exotic species while Rauvolfia serpentina is an endemic species in India. What do these terms exotic and endemic refer to?



**35.** A plant may have different names in different regions of the country or world. How do botanists solve this problem?



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**36.** Brinjal and potato belong to the same genus solanum, but to two different species. What defines them as separate species?



**37.** Properties of cell organelles are not always found in the molecular constituents of cell organelles. Justify.



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**38.** The number and kinds of organism is not constant. How do you explain this statement?



**39.** What is the difference between living things and non-living things.



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**40.** What do you understand from terms like in-situ and ex-situ conservation.



**41.** Describe the metabolism. Explain anabolism & catabolism with suitable example.



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**42.** Distinguish between botanical gardens, zoological park and biodiversity park with reference to characteristic.



**43.** Jijamata Udyan, the famous zoo in Mumbai has acclimatised Humboldt penguins. Why should penguins be acclimatised when kept at a place away from their natural habitat?



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**44.** What is meant by living? Give any four defining features of life forms.



**45.** A scientist has come across a plant which he feels is a new species. How will he go about its identification, classification and nomenclature.



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**46.** Brassica campestris Linn.



**47.** What are taxonomical aids? Give the importance of herbaria and museums. How are Botanical gardens and Zoological parks useful in conserving biodiversity?



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**48.** Define a taxon. What is meant by taxonomic hierarchy. Give a flow diagram from the lowest to highest category for a plant and an animal. What happens to the number of

individuals and number of shared characters as we go up the taxonomical hierarchy?



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**49.** A student of taxonomy was puzzled when told by his professor to look for a key to identify a plant. He went to his friend to clarify what 'Key' the professor was referring to? What would the friend explain to him?



**50.** Metabolism is a defining feature of all living organisms without exception. Isolated metabolic reactions in vitro are not living things but surely living reactions. Comment.



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**51.** Do you consider a person in coma-living or dead?



**52.** What is the similarity and dissimilarity between "whole moong daal" and "broken moong daal" in terms of respiration and growth? Based on these parameters classify them into living or non living?



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**53.** Some of the properties of tissues are not the constituents of its cells.

Give three examples to support the statement.



# Exercise

1. Which is not a property of living being?

A. metabolism

B. decay

C. growth

D. reproduction

#### **Answer:**



**2.** A particular plant is strictly seasonal plant. Which one of the following is best suited if it is to be studied in the laboratory?

A. herbarium

B. museum

C. botanical garden

D. flower exhibition

**Answer:** 

**3.** A group of students found two cockroaches in the classroom. They had a debate whether they are alive or dead. Which life property will help them to do so?

A. metabolism

B. growth

C. irritability

D. reproduction



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**4.** Life complex phenomenon which show basic features like...

- A. growth, reproduction
- B. homoestasis, adaptation, death
- C. irritability, metabolism
- D. all of these



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**5.** Who called protoplasm as physical basis of life

- A. Aristotle
- B. Theopheasis
- C. Huxley
- D. Miller



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**6.** Organism can maintaimn their internal environment despite change in external environment is called as

A. osmosis

B. homeostasis

C. irritability

D. endotherms



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**7.** Which group of animal depend on their environment for temperature regulationi.e. they change body temperature according to temperature of environment.

A. cold blooded animals

B. piokilotherms

C. ectotherms

D. all of these

### **Answer:**



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8. Animals like birds and mammals are

A. warm blooded

B. endothermic

C. maintain body temperature constant

D. all of these



- 9. All of the following are correct except?
  - A. When it comes to human beings, it is all more difficult to define living state.
  - B. We observe patients lying in coma in hospital virtually supported by machines

which replace heart and lungs, patient is otherwise brain-dead.

- C. The patient has no self-consciousness, are such patients who never come back to normal life, living or non-living.
- D. Consciousness, growth, reproduction are definite features

#### **Answer:**



- **10.** Which of the following is wrong about growth?
  - A. increases in mass & increase in number are twin characters of growth
  - B. multicellular organisms grow by cell division
  - C. growth of animal is intrinsic while in plants it is extrensic
  - D. irreversible increase in size & number of cells



- 11. Which of the following is true?
  - A. in plants growth occur continuosly throught life while in animal growth takes place upto certain age.
  - B. growth of living is intrinsic while non living is extrensic by accumulation of

materias in mountain, boulders, and mounds

C. both a and b

D. a is true b is wrong

## **Answer:**



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**12.** Growth is .....

A. quantitative

- B. qualitative
- C. quantitative but never qualitative
- D. both a and b



- 13. Which of the following statement is true
  - A. it is permanent change measured
    - against time

B. unicellular organism grow by cell division while in animals & plants growth, reproduction mutually exclusive events.

C. growth is not definng feature of life

D. growth is quatitative, extrinsic, temporary

#### **Answer:**



14.	Formation	of	new	individuals	from	pre-
existing one is called as						

A. evolution

B. reproduction

C. irritability

D. metabolism

### **Answer:**



**15.** Which method of reproduction is premitive type and generally producing identical individuals....

- A. asexual
- B. amphimixis
- C. biparental method
- D. sexual

## **Answer:**



- **16.** Which of the following is wrong?
  - A. Fungi multiply & spread easily due to the millions of asexual spores
  - B. In lower organisms like yeast and hydra, we observe budding
  - C. sexual reproduction leads to produce identical individuals
  - D. In planaria (flat worms) we observetrue regeneration i.e. a fragmented organism

regenerates the lost part of its body and becomes, a new organism

## **Answer:**



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**17.** Which of the following is wrong?

A. The fungi, the filamentous algae, the protonema of mosses all easily multiply by fragmentation.

- B. when it comes to unicellular organims

  like bacteria, unicellular algae or

  Amoeba, reproduction is synonymous

  with growth
- C. in single celled organims, we are not very clear about the usage of these two terms growth and reproduction
- D. many organisms which can reproduce (mules, sterile wroker bees, infertile human couples)



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## 18. What is the role of death

A. it recycles minerals

B. controls the population

C. Both a & b

D. maintain species

#### **Answer:**

## 19. Which of the following is true

A. animal show movement and locomotion

B. higher plants show movement but not

locomotion

C. animal show locomotion in search of

food and mating.

D. all above are true



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20. All living organisms show common except.

A. responsiveness

B. metabolism

C. Reproduction

D. locomoting

**Answer:** 

**21.** All living organisms are made up of chemicals. Which of the following are constructive reactions and which are called as destructive reactions?

A. anabolism, catabolism

B. catabolism, anabolism

C. exothermic process

D. metabolism, anabolism



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22. Which of the following are true except?

A. non living organisms do not exist metabolism

B. metabolic isolated reactions can be demonstrated outside the body in cell free system, isolated metabolic reactions

in testube is neither living nor non living.

C. all metabolic reactions are catabolic

D. metaboism is defining feature of life

### **Answer:**



23. Which of the following is true for irritability

- A. all living organisms can give response to particular stimulus
- B. human being is only animal aware himself has self consciousness
- C. it is defining property of living
- D. all above



**24.** The collection and labelled of pressed, dried, preserved plants mounted on paper sheet and labelled is called as

- A. key
- B. plant preservation
- C. herbaria
- D. specimen arboretum preservation

#### **Answer:**



**25.** The herbaria preparation is method of making.

- A. botanical garden
- B. herbaria garden
- C. dry garden
- D. preserved garden

#### **Answer:**



26. The hebarium sheet is labelled as.....

A. upper left side of sheet

B. upper right side of sheet

C. lower left side of sheet

D. lower right side of sheet

### **Answer:**



**27.** Which of following statement is correct for herbarium?

A. The herbarium sheets also carry a label providing information about date and place of collection, local and botanical names, family, collector's name

B. Herbaria also serve as quick referral systems in taxonomical studies

C. Herbarium is a store house of collected plant specimens that are dried pressed and preserved on sheets

D. all of these

## **Answer:**



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28. Largest herbarium of world is at.....

A. New york

- B. Kolkata
- C. Kew London
- D. Paris



- 29. The standard size of herbarium sheet is
  - A. 29X42cm
  - B. 35 imes 45cm

C. 35xx35 cm'

D. 45 imes 55cm

## **Answer:**



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## **30.** Herbaria are useful for.....

A. identification of plants

B. store house for future use

C. taxonomic reasearch

D. all of these

#### **Answer:**



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**31.** The institution located on land and grows number of types of plants obtained from different places is called as.....

A. National park

B. botanical garden

C. museum

D. key

### **Answer:**



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# **32.** Which of the following is true

A. botanical garden

B. herbaria

C. museum

D. all of these

## **Answer:**



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**33.** First modern day botanical garden was established in

A. Paris

B. New york

C. Kolkata

D. Italy

### **Answer:**



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**34.** The botanical garden with growing trees and shrubs is called as....

A. museum

B. park

C. arboretum

D. scenturies

### **Answer:**



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**35.** The famous botanical garden in the world is

A. national botanical research institute

Lucknow

B. Indian botanical garden kolkata

- C. royal botanical garden kewlondon
- D. botanical garden Paris



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**36.** Botanical gardens are useful....

- A. comparative taxonomic study
- B. different ornamental plants are

cultivated

C. medicinally important plants are

cultivated

D. all of these

## **Answer:**



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**37.** The place where storing, preservation and exhibition of objects is called as

A. botanical garden

- B. museum
- C. scentury
- D. national parks



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**38.** Which of the following is correct?

Museums have collections of preserved plantand animal specimens for study and reference

Plant and animal specimens may also be preserved as dry specimens

Insects are preserved in insect boxes after collecting, killing and pinning

Larger animals like birds and mammals are usually stuffed and preserved

Museums often have collections of skeletons of animals too

A. A, B, C correct, D, E, wrong

B. A, E, C correct D, B wrong

C. All are correct

D. A, B, E correct, D, C, wrong

#### **Answer:**



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**39.** Which of the following is correct?

Museums have collections of preserved plantand animal specimens for study and reference

Plant and animal specimens may also be preserved as dry specimens

Insects are preserved in insect boxes after collecting, killing and pinning Larger animals like birds and mammals are usually stuffed and preserved Museums often have collections of skeletons of animals too A. A, B, C correct, D, E, wrong B. A, E, C correct D, B wrong C. All are correct D. A, B, E correct, D, C, wrong Answer:

**40.** Zoological parks are useful for

A. study of animal types by students

B. public becomes more familiar to wild

animals

C. source of tourist attraction

D. all of these

**41.** As we go from species to kingdom in a taxonomic hierarchy, the number of common characteristics.

A. will decrease

B. will increase

C. Remain same

D. May increase or decrease

**42.** Which of the following 'suffixes' used for units of classification in plants indicates a taxonomic category of 'family'

A. Ales

B. Onae

C. Aceae

D. Ae

**43.** The term 'systematics' refers to.

A. Identification and classification of plants and animals

B. Nomenclature and identification of plants and animals

C. Diversity of kinds of organisms and their relationship

D. Different kinds of organisms and their classification

### **Answer:**



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**44.** Genus represents.

A. An individual plant or animal

B. A collection of plants or animals

C. Group of closely related species of plants or animals

D. None of these

### **Answer:**



**45.** The taxonomic unit 'Phylum' in the classification of animals is equivalent to which hierarchial level in classification of plants.

A. Class B. Order C. Division D. Family **Answer: Watch Video Solution** 46. Botanical garden and zoological parks have

A. Collection of endemic living species only

- B. Collection of exotic living species only
- C. Collection of endemic and exotic living species
- D. Collection of only local plants and animals

## Answer:



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**47.** Taxonomic key is one of the taxonomic tools in the identification and classification of plants and animals. It is used in the preparation of.

A. Monographs

B. flora

C. Both a & b

D. None of these



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**48.** All living organisms are linked to one another because

A. They have common genetic material of the same type

B. They share common genetic material but to varying degrees

C. All have common cellular organization

D. All of above

#### **Answer:**



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- **49.** Which of the following is a defining characteristic of living organims?
  - A. Growth
  - B. Ability to make sound
  - C. Reproduction
  - D. Response to external stimuli

#### **Answer:**



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**50.** Match the following and choose the correct option:

A) Family i. tuberosum

B) Kingdom ii. Polymoniales

C) Order iii. Solanum

D) Species iv. Plantae

E) Genus v. Solanacea

A. i-D, ii-C, iii-E, iv-B, v-A

B. i-E, ii-D, iii-B, iv-A, v-C

C. i-D, ii-E, iii-B, iv-A, v-C

D. i-E, ii-C, iii-B, iv-A, v-D

#### **Answer:**



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