



# BIOLOGY

# **BOOKS - UNITED BOOK HOUSE**

# K.U.EXPERIMENTAL HIGH SCHOOL PAPER



1. Identify the plant hormone that regulates

the growth of the lateral buds-

A. Auxin

B. Cytokinin

C. Gibberellin

D. Thyroxine

#### Answer:

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**2.** Choose the correct hormone that increases the blood sugar level and its known as hyperglycemic hormone-

A. Insulin

- B. Glucagon
- C. ACTH
- D. Oestrogen

#### **Answer:**



**3.** Determine the number of nerves that make

up the peripheral nervous system of humans-

- A. 12 pairs of nerve
- B. 43 pairs of nerve
- C. 31 pairs of nerve
- D. 10 pairs of nerve

#### **Answer:**



4. Select the correct feature of chromosome

from the following-

A. Chromosome are distinct and clearly
visible at prophase
B. Daughter chromosomes move to
opposites poles by contraction of
spindle fibres at metaphase
C. Nuclear membrane and nucleolus
disappear at telophase
D. In S-phase DNA replication and
duplication of chromosome occur.





**5.** Identify the organism that reproduces asexually by multiple fission-

A. Plasmodium

B. Spirogyra

C. Hydra

D. Planaria

#### Answer:





**6.** Select from the following the process of rapid raising of new plants from small plant tissues with the help of tissue culture technique is-

A. hybridisation

B. micropropagation

C. grafting

D. cutting

#### Answer:



**7.** Identity the correct statement regarding pattern of inheritance from the following-

A. The phenotypic ratio of incomplete

dominance is 1:2:1 instead of 3:1

B. The genotypic ratio of dihybrid cross on

a pea plant performed by Mendel is

9:3:3:1

C. In Pea plant green coloured seed is

dominant over the yellow coloured seed

D. Thalassaemia is a sex linked genetic

disorder

**Answer:** 

8. Determine from the following the phenomenon that does not following the Law of Segregation-

A. crossing over

B. linkage

C. incomplete dominance

D. dominant-recesive interaction

### Answer:

**9.** Calculate the probability of the thalassaemic child born to a couple who are both carrier for thalassemia is-

A. 50% daughters and 50% sons are haemophilic B. 100% sons & 450% daughters haemophilic C. 100% sons & 100&% daughter haemophilic



haemophilic

#### **Answer:**

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**10.** Select from the following the stage of evolution of horse where the third digit becomes bigger and is hoofed-

A. Eohippus

B. Mesohippus

C. Equus

D. Merychippus

### Answer:

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**11.** Choose the organ that absorbs gas from swimbladder of bony fish-

A. Retia mirabilia

- B. Red gland
- C. Salt gland

## D. Gills

### Answer:

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**12.** Determine from the following the percentage of extension of RBC that occurs in diluted condition of blood in camel-

A. 2.4

B. 1.5

C. 0.8

D. 1.2

#### **Answer:**



**13.** Select from the following the process of Nitrification-

A. Nitrogen  $\rightarrow$  Ammonia  $\rightarrow$  Amino acid B. Ammonia  $\rightarrow$  Amino acid  $\rightarrow$  Nitrogen C. Ammonia  $\rightarrow$  Nitrite  $\rightarrow$  Nitrate D. Nitrate  $\rightarrow$  Nitrite  $\rightarrow$  Nitrogen **Answer:** Watch Video Solution

14. Select the correct statement with relation

to asthma from the following-

A. Asthma is not a chronic lung disease B. Athama is caused by entry of allergen or foreign particles in the body C. The most important cause of acute asthma is water pollution D. Chewing of tobacco can cause asthma

Answer:

15. Identify from the following an example os

ex-situ conservation

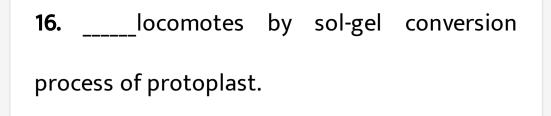
A. Biosphere Reserve

**B.** Sanctuary

C. National park

D. Botanical garden

#### Answer:





**17.** In \_ phase of human development the individual attains high growth rate, increase secretion of sex-hormone occures, secondary sex characters get expressed in both sex,

18. Show dihybrid cross between TTRR and ttrr.

Find phenotypic ratio

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19. Same structures are modified differently in

different organisms due to different

adaptation is called \_\_\_\_evolution.

**20.** Very small particles of dust, smoke, microbes, soil, etc, that are present in air and causes air pollution are called\_\_\_\_



21. You often read of tigerskin being recovered

from \_\_\_ in newspaper and you can consider

this as a major cause of loss of biodiversity.



22. Decide whether the following statements

are True or False

LH stimulates the ovulation process in female

ovary.



23. Decide whether the following statements

are True or False

Crossing over occurs between the non-sister chromatids of homologous chromosome during meiotic cell division.



24. Decide whether the following statements

are True or False

Thalassemia is a form of inherited autosomal

dominant blood disorder.

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25. Decide whether the following statements

are True or False

Variation takes place due to struggle for

existence.



26. Decide whether the following statements

are True or False

Eutrophication is caused due to air pollution.

27. How will offsprings be affected if carrier

female is married with X-linked diseased male

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28. Different words are being formed by arranging the letters of the word "SUCCESS" all the words obtained by written in the form of a dictionary The number of words in which no two C's and

no two S's are together is





29. Choose the odd one write it: Lung cancer,

Goitre, Diabetis, Dwarfism

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**30.** Mention one function of spinal cord.

**31.** A pair of related terms is given below on the bais of th relationship in the first pair write the suitable word in the gap of second pair:

Mitosis: Spindle formation:\_: without spindle

formation.

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32. Mention the genotypes of green smooth

secc bearingin pea plants.



**33.** A patient appears at a doctor's chamber with symptoms like anaemina, deformed bones, enlargement of spleen, tiredness and jaundice. Identify the genetic disease the patient is suffering from.

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34. State one example of behavioural adaptive

feature of chimpanzee.



**36.** Your grandmother is suffering from high pressure. Determine which plant can be used to make medicine for such disease.

**37.** Discuss the movement of variation in

Mimosa pudica.

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**38.** Distinguish between the endocrine & exocrine gland the basis of following feature.

presence of duct

**39.** Distinguish between the endocrine & exocrine gland the basis of following feature. nature of substance reband.

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**40.** State the role of thyroxine hormones in

control in BMR.

**41.** Light from outside has to fan through your eyeball to fall upon the retina. Mention the media in between that acts as refractive meida to the light.

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42. Compare the haploid and diploid cell with

respect to the folloiwng points-

Occurance



**43.** Compare the haploid and diploid cell with respect to the folloiwng points-

Chromosome number.



**44.** You have a plant that doen't produce seeds. Explain any two methods of artificial vegetative reproductiopn ofr this plant to propegate.

**45.** Write down three advantages of cross pollination.



# 46. Compare pure and hybrid character with

one example of each.

47. Explain two common reasons behind Mendel's success. Watch Video Solution

**48.** Discuss how adaptation is related to evolution.



**49.** Birefly explain two features of comparactive embryology of vertebraes as evidence of evolution.



# 50. Explain the adaptation process of camel in

desert due to shape of RBC?



**51.** Write down the law derived from Mendel's dihybrid cross. Explain with an example how the hereditary transmission of haemophila occurs.

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52. You have joined JFM. Mention your role in

conserving biodiversity.

**53.** Explain why you should consider Corbett National Park as example in In-situ conservation.

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**54.** Name a nitrogenous compound that acts as potent green house gas & explain how human activities cause increase of this gas in atmosphere.



55. Name two exotic plant species of India and

how they are posing threat on Indian species.

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56. Draw a neat diagram of chromosome and

label the following parts:

telomere, satellite, secondary constriction,

chromatid

57. Give a neat diagram of a reflex arc and label

the following structures:

receptor, effector, motor neuron, sensory

neuron.



58. Write any two characteristics of

anemophilous flower.

**59.** Mention two important events of anaphase of mitosis in animal cell. Explain how growth and development are different from each other.



**60.** Explain the role of father in sex determination in human. write down the cause

of thalassemia.



**61.** Explain why haemophilia is found more in males than in females with the help of a cross. How can genetic counselling be helpful in making the world free of genetic diseases.

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62. Write four important features modified in

the evolution of horse.

**63.** Sundari plant can thrive well in Sundarban while pine tree cannot. Explain the statement in the life of adaption of Sundari plants.

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**64.** Write down the causes of the reduction of biodiversity. You live in an area where there are many factories coming up. Explain why you are Having a lot of breating and digestive problems in your area recently.

**65.** Write down three environmental problems

of Sundarban. Mention the steps taken for conservation of tiger in India.

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66. Draw a word diagram of nitrogen cycle.

Write down the importance of this cycle.

67. Name two conservational site of Red-

Panda.

