



# BIOLOGY

## BOOKS - BEYOND PUBLICATION

### HEREDITY - FROM PARENT TO PROGENY

#### Example

1. What are variations ? How do they help organisms?



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2. The cross between Hybrid tall ( $Tt$ ) and dwarf ( $tt$ ) what will be F1 generation progeny write phenotypic and genotypic ratio



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3. One experimenter cut the tails of parent rats, what could be the traits in offsprings?



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4. In a mango garden a farmer saw one mango tree with full of mango fruits but with a lot of pests. He also saw another mango tree without pests but with few mangoes. But the farmer wants the mango tree with full of mango fruits and pest free. Is it possible to create new mango tree which the farmer wants? Can you explain how it is possible?



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5. Explain monohybrid experiment with an example. Which law of inheritance can we understand? Explain.



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6. State the law of independent assortment.



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7. How does sex determination happen in human?



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8. Explain the Darwin's theory of Natural selection with an example. What do you understand by the term natural selection ?  
Write Darwin's theory of evolution.



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9. What are variations? Explain with a suitable example.



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10. What variations generally have you observed in the species of cow?



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**11.** What are the characters Mendel selected for his experiments on pea plant?



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**12.** In what way Mendel used the word Traits?

Explain using an example.



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**13.** What are the differences that Mendel observed between parent and F2 generation?



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**14.** Male is responsible for sex determination of baby - do you agree ? If so write your answer with a flow chart.



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**15.** Write a brief note on Homologous and analogous organs.



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**16.** Write a brief note on Homologous and analogous organs.



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**17.** How do scientists utilise the information about fossils?



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**18.** Fossils are the precious evidences preserved by the nature to help us knowing about ancient life forms. Write the information you collected about fossils.



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**19.** Mendel selected a pea plant for his experiments. Mention the reasons for the selection of these plants.



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**20.** Mendel selected a pea plant for his experiments. Mention the reasons for the selection of these plants.



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21. what is inheritance of acquired characters?



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22. Collect information on the inherited traits in your family members and write a note on it.



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23. Observe flowering plants in your surroundings? Write similarities and differences between them.



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**24.** With the help of given information write your comment on evidence of evolution. Mammals have forelimbs as do birds, reptiles and amphibians. The basic structure of the limbs is similar, though it has been modified to perform different functions.



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**25.** Collect information about carbon dating method. Discuss with your physical science teacher.



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**26.** Name the method, which helps in determining the age of fossils.



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**27.** Draw a checker board show the law of independent assortment with a flow chart and explain the ratio



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**28.** Explain the process to understand monohybrid cross of Mendel experiment with a checker board.



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**29.** Prepare a chart showing evolution of man through ages



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**30.** Nature selects only desirable characters.  
Prepare a cartoon.



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**31.** What is your understanding about survival of the fittest ? Give some situations or examples that you observe in your surroundings.



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**32.** Write a monologue on evolution of a man to perform a stage show on the theatre day in your school.



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**33.** How are new characters produced ?



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**34.** Name the inherited diseases?



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**35.** Do the new characters have any role in the process of evolution?



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**36.** How does the evolution of organisms have taken place?



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**37.** Is variation all about apparent difference ?  
Or is it about some subtle differences as well that we most often overlook?



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**38.** Why variations are important ? How are variations useful for an organism or a population?



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**39.** How do parent plants pass on their traits to the seeds?



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**40.** Will the seeds from tall plants always produce new tall plants?



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**41.** Can we test our hypothesis with more than one factor ? How can this be applied to Mendel's experiment ?



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**42.** What should be the percentage of each type of plants in F<sub>2</sub> generation produced in dihybrid cross between pea plants with yellow, smooth seeds and green wrinkled seeds?



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**43.** What will happen if sperm containing X chromosome fertilizes the ovum?



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**44.** Who decides the sex of the baby -mother or father ?



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**45.** Is the sex also a character or trait? Does it follow mendel's law of dominance?



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**46.** Were all your traits similar to that of your parents?



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**47.** How does the evolution of organisms have taken place?



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**48.** Are birds and bats more closely related to each other than to sauirrels or lizards?



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**49.** Do embryological evidences indicate that frogs have evolved from ancestors of fish?



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**50.** Does the life history of every individual exhibit the structural features of its ancestors?



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**51.** Think why ancient human beings travelled from one place to other and how they travelled.



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**52.** Think of your own family, what similarities do you share with your father and mother? Draw a table to represent the similarities of some characters like colour of eye (cornea), colour of hair, shape of nose, shape of face, type of earlobe (attached or free) inner thumb markings, etc. Write your characters in one column and that of your parents in the other columns.

(Q) where do you think your mother got tat character from ?



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**53.** Think of your own family, what similarities do you share with your father and mother? Draw a table to represent the similarities of some characters like colour of eye (cornea), colour of hair, shape of nose, shape of face, type of earlobe (attached or free) inner thumb markings, etc. Write your characters in one column and that of your parents in the other columns.

(Q). Is there any character in you, similar to that of your mother as well as your grandma?



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**54.** Think of your own family, what similarities do you share with your father and mother? Draw a table to represent the similarities of some characters like colour of eye (cornea), colour of hair, shape of nose, shape of face, type of earlobe (attached or free) inner thumb markings, etc. Write your characters in one column and that of your parents in the other columns.

(Q) Is there any character in you, similar only to that of your grandma?



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**55.** Think of your own family, what similarities do you share with your father and mother? Draw a table to represent the similarities of some characters like colour of eye (cornea), colour of hair, shape of nose, shape of face, type of earlobe (attached or free) inner thumb markings, etc. Write your characters in one

column and that of your parents in the other columns.

(Q) How do you think these characters may have been inherited by you from grandma



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**56.** Think of your own family, what similarities do you share with your father and mother? Draw a table to represent the similarities of some characters like colour of eye (cornea), colour of hair, shape of nose, shape of face,

type of earlobe (attached or free) inner thumb markings, etc. Write your characters in one column and that of your parents in the other columns.

(Q) . is there any character that is not present in grandma but present in your mother and you ?



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**57.** Think of your own family, what similarities do you share with your father and mother?



Draw a table to represent the similarities of some characters like colour of eye (cornea), colour of hair, shape of nose, shape of face, type of earlobe (attached or free) inner thumb markings, etc. Write your characters in one column and that of your parents in the other columns.

(Q) where do you think your mother got tat character from ?



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**58.** Observe some of your friends and note their characters in the following table. Fill in yours as well.

as well.

Name of your friend	Colour of skin	Earlobes Free/Attached	Marking on inner side of thumb	Length of forehead	Colour of eyes (Cornea)	Any other features



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**59.** Observe some of your friends and note their characters in the following table. Fill in yours as well. (Q) A. Compare your characters to that of any one of your friend. How many

characters did you find were similar among you and your friend?



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**60.** Observe some of your friends and note their characters in the following table. Fill in yours as well. (Q) B. Do you share more similar characters with your parents or with your friends?



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**61.** Observe some of your friends and note their characters in the following table. Fill in yours as well. (Q) C. Do you think that your differences from parents are same as differences from friends?why/ why not?



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**62.** Observe seeds in a pea or bean pod. You may observe several parts to arrive at a generalisation.

(Q). Can you find two similar seeds there?



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**63.** Observe seeds in a pea or bean pod. You may observe several parts to arrive at a generalisation.

(Q). Can you find two similar seeds there?



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**64.** Observe seeds in a pea or bean pod. You may observe several parts to arrive at a

generalisation.

(Q) B. what makes them vary?



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**65.** Observe seeds in a pea or bean pod. You may observe several parts to arrive at a generalisation.

(Q) C. Why are variations important? How are variations useful for an organism or a population?



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**66.** Let us do the following activity to understand the mendelian principles of heredity. Materials required:

a. 3cm length and 1 cm breadth chart pieces -4

b. 2 cm length and 1 cm breadth chart pieces

-4

c. Red buttons -4

d. white buttons -4

e. chart, scale, sketch pen, 2 bags.

Method: Prepare a chart with 2x2 boxes along with number and symbol as shown in the

figure.

Game 1: Monohybrid cross (starting with hybrid parents) To start with take 1,2 or 3,4 . In case you start 1,2 pick all the 16 long and short pieces and prepare such pairs in each of which you have a long and short piece. Take 4 pairs each of long and short strips and put them in two separate bags. Now each bag contains 8 strips (4 long and 4short). One bag say 'A' represents male and the bag 'B' represents female . Now randomly pick one strip each from bag A and B and put them together in the 1 on the chart. Keep picking out the strips



and arrange them in the same manner till your bags are empty. Same time your boxes in the chart are filled with pairs of strips. you might have got the following combinations, two long strips, one long and one short strip, two short strips.

(Q) C. What is the number of short strip pairs?



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**67.** Let us do the following activity to understand the mendelian principles of

heredity. Materials required:

a. 3cm length and 1 cm breadth chart pieces -4

b. 2 cm length and 1 cm breadth chart pieces

-4

c. Red buttons -4

d. white buttons -4

e. chart, scale, sketch pen pencil, 2 bags.

Method: Prepare a chart with 2x2 boxes along with number and symbol as shown in the figure.

Game 1: Monohybrid cross (starting with hybrid parents) To start with take 1,2 or 3,4 . In case you start 1,2 pick all the 16 long and short

pieces and prepare such pairs in each of which you have a long and short piece. Take 4 pairs each of long and short strips and put them in two separate bags. Now each bag contains 8 strips (4 long and 4 short). One bag say 'A' represents male and the bag 'B' represents female. Now randomly pick one strip each from bag A and B and put them together in the 1 on the chart. Keep picking out the strips and arrange them in the same manner till your bags are empty. Same time your boxes in the chart are filled with pairs of strips. you might have got the following combinations, two long

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(Q) C. What is the number of short strip pairs?



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**68.** Let us do the following activity to understand the mendelian principles of heredity. Materials required:

a. 3cm length and 1 cm breadth chart pieces -4

b. 2 cm length and 1 cm breadth chart pieces

-4

c. Red buttons -4

d. white buttons -4

e. chart, scale, sketch pen pencil, 2 bags.

Method: Prepare a chart with 2x2 boxes along with number and symbol as shown in the figure.

Game 1: Monohybrid cross (starting with hybrid parents) To start with take 1,2 or 3,4 . In case you start 1,2 pick all the 16 long and short pieces and prepare such pairs in each of which you have a long and short piece. Take 4 pairs each of long and short strips and put them in two separate bags. Now each bag contains 8

strips (4 long and 4 short). One bag say 'A' represents male and the bag 'B' represents female. Now randomly pick one strip each from bag A and B and put them together in the 1 on the chart. Keep picking out the strips and arrange them in the same manner till your bags are empty. Same time your boxes in the chart are filled with pairs of strips. you might have got the following combinations, two long strips, one long and one short strip, two short strips.

(Q) D. What is the percentage of each type? also find their ratios.



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**69.** Let us do the following activity to understand the mendelian principles of heredity. Materials required:

a. 3cm length and 1 cm breadth chart pieces -4

b. 2 cm length and 1 cm breadth chart pieces

-4

c. Red buttons -4

d. white buttons -4

e. chart, scale, sketch pen pencil, 2 bags.

**Method:** Prepare a chart with 2x2 boxes along

with number and symbol as shown in the figure.

Game 1: Monohybrid cross (starting with hybrid parents) To start with take 1,2 or 3,4 . In case you start 1,2 pick all the 16 long and short pieces and prepare such pairs in each of which you have a long and short piece. Take 4 pairs each of long and short strips and put them in two separate bags. Now each bag contains 8 strips (4 long and 4 short). One bag say 'A' represents male and the bag 'B' represents female . Now randomly pick one strip each from bag A and B and put them together in



the 1 on the chart. Keep picking out the strips and arrange them in the same manner till your bags are empty. Same time your boxes in the chart are filled with pairs of strips. you might have got the following combinations, two long strips, one long and one short strip, two short strips.

(Q) D. What is the percentage of each type? also find their ratios.



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**70.** Let us do the following activity to understand the mendelian principles of heredity. Materials required:

a. 3cm length and 1 cm breadth chart pieces -4

b. 2 cm length and 1 cm breadth chart pieces

-4

c. Red buttons -4

d. white buttons -4

e. chart, scale, sketch pen pencil, 2 bags.

Method: Prepare a chart with 2x2 boxes along with number and symbol as shown in the figure.

Game 1: Monohybrid cross (starting with hybrid parents) To start with take 1,2 or 3,4 . In case you start 1,2 pick all the 16 long and short pieces and prepare such pairs in each of which you have a long and short piece. Take 4 pairs each of long and short strips and put them in two separate bags. Now each bag contains 8 strips (4 long and 4 short). One bag say 'A' represents male and the bag 'B' represents female . Now randomly pick one strip each from bag A and B and put them together in the 1 on the chart. Keep picking out the strips and arrange them in the same manner till your

bags are empty. Same time your boxes in the chart are filled with pairs of strips. you might have got the following combinations, two long strips, one long and one short strip, two short strips.

(Q) C. What is the number of short strip pairs?



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**71.** Let us do the following activity to understand the mendelian principles of heredity. Materials required:

- a. 3cm length and 1 cm breadth chart pieces -4
- b. 2 cm length and 1 cm breadth chart pieces -4
- c. Red buttons -4
- d. white buttons -4
- e. chart, scale, sketch pen pencil, 2 bags.

Method: Prepare a chart with 2x2 boxes along with number and symbol as shown in the figure.

Game 1: Monohybrid cross (starting with hybrid parents) To start with take 1,2 or 3,4 . In case you start 1,2 pick all the 16 long and short pieces and prepare such pairs in each of which

you have a long and short piece. Take 4 pairs each of long and short strips and put them in two separate bags. Now each bag contains 8 strips (4 long and 4 short). One bag say 'A' represents male and the bag 'B' represents female. Now randomly pick one strip each from bag A and B and put them together in the 1 on the chart. Keep picking out the strips and arrange them in the same manner till your bags are empty. Same time your boxes in the chart are filled with pairs of strips. you might have got the following combinations, two long strips, one long and one short strip, two short

strips.

(Q) A. what is the number of long strip paris?



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**72.** Let us do the following activity to understand the mendelian principles of heredity. Materials required:

a. 3cm length and 1 cm breadth chart pieces -4

b. 2 cm length and 1 cm breadth chart pieces

-4

c. Red byuttons -4

d. white buttons -4

e. chart, scale, sketch pen pencil, 2 bags.

Method: Prepare a chart with 2x2 boxes along with number and symbol as shown in the figure.

Game 1: Monohybrid cross (starting with hybrid parents) To start with take 1,2 or 3,4 . In case you start 1,2 pick all the 16 long and short pieces and prepare such pairs in each of which you have a long and short piece. Take 4 pairs each of long and short strips and put them in two separate bags. Now each bag contains 8 strips (4 long and 4 short). One bag say 'A'



represents male and the bag 'B' represents female. Now randomly pick one strip each from bag A and B and put them together in the 1 on the chart. Keep picking out the strips and arrange them in the same manner till your bags are empty. Same time your boxes in the chart are filled with pairs of strips. you might have got the following combinations, two long strips, one long and one short strip, two short strips.

(Q) B. What is the number of one long and one short pairs?



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**73.** Let us do the following activity to understand the mendelian principles of heredity. Materials required:

a. 3cm length and 1 cm breadth chart pieces -4

b. 2 cm length and 1 cm breadth chart pieces

-4

c. Red buttons -4

d. white buttons -4

e. chart, scale, sketch pen pencil, 2 bags.

Method: Prepare a chart with 2x2 boxes along with number and symbol as shown in the

figure.

Game 1: Monohybrid cross (starting with hybrid parents) To start with take 1,2 or 3,4 . In case you start 1,2 pick all the 16 long and short pieces and prepare such pairs in each of which you have a long and short piece. Take 4 pairs each of long and short strips and put them in two separate bags. Now each bag contains 8 strips (4 long and 4 short). One bag say 'A' represents male and the bag 'B' represents female . Now randomly pick one strip each from bag A and B and put them together in the 1 on the chart. Keep picking out the strips

and arrange them in the same manner till your bags are empty. Same time your boxes in the chart are filled with pairs of strips. you might have got the following combinations, two long strips, one long and one short strip, two short strips.

(Q) C. What is the number of short strip pairs?



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**74.** What should be the percentage of each type of plants in F<sub>2</sub> generation produced in

diybrid crossbetween pea plants with yellow,  
mooth seeds and green wrinkled seeds?



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**75.** What can be concluded from this?



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**76.** What do you think will be condition of the  
beetles ?



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**77.** Let us observe different stages of development of vertebrate embryos. Try to find out similarities and differences and discuss with your friends.



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**78.** What do you infer about the embryological evidences of various organisms ?



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**79.** In a forest there are two types of deer, in which one type of deer can run very fast .  
Whereas second type of deer can not run as fast as the first one. Lions, tigers hunt der for their food. Imagine which type of deer is going to survive in the ofrest, which type of deer population is going to be eliminated? And why ?



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**80.** What is macro evolution or speciation?



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**81.** What is the cause of variations?



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**82.** Who conducted experiments on frog to know the significance of spinal cord ?



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**83.** What is meant by heredity ?



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**84.** What is a hybrid ?



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**85.** What is the genotypic ratio of monohybrid cross?



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**86.** What is the phenotypic ratio of dihybrid cross?



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**87.** what is evolution that is associated with analogous organs?



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**88.** Give example for homologous organs.



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**89.** Give example for analogous organs.



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**90.** Connecting link.



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**91.** What are fossils?



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**92.** What is human evolution?



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**93.** How many vestigial organs are present in man



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**94.** indentify the scientist. He was the first person to propose the theory of evolution. He took girffee to explain his theory.



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**95.** What are variations ? How do they help organisms?



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**96.** What is phenotype ratio?



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**97.** What is phenotype and genotype ? Explain them with the help of mendel's monohy-brid cross.



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**98.** What is F2 generation?



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**99.** Which of the following evidences does not favour the Lamarckian concept of inheritance of acquired characters ?



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**100.** What is convergent evolution?



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**101.** What is convergent evolution?



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**102.** What is the method used to determine the age of the fossil ?



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**103.** What is embryology?



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**104.** What is micro evolution?



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**105.** State the law of segregation.



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**106.** What are allosomes?



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**107.** What are autosomes?



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**108.** What is law of dominance?



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**109.** what is inheritance of acquired characters?



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**110.** What are f-centers ?



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**111.** What is F2 generation?



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**112.** What is F3 generation



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**113.** State the law of independent assortment.



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**114.** What are homozygous alleles?



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**115.** What is heterozygous allele?



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**116.** What are inherited traits?



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**117.** What is inertia ? What gives the measure of inertia ?



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**118.** What is meant by survival of the fittest?



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**119.** Homologous organs explain



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**120.** Give example for analogous organs.



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**121.** What is palaeontology?



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**122.** What is the method used to determine the age of the fossil ?



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**123.** The ancestors of Dinosaurs were



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**124.** what are vestigial organs?



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**125.** Who proposed theory of inheritance of acquired characters?



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**126.** Who proved that bodily changes are not inherited?



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**127.** Who proposed the theory of natural selection?



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**128.** What does the theory of natural selection state?



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**129.** Give an example for vestigial organ in our body.



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**130.** Why man is called a moving museum of vestigial organs?



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**131.** Who decides the sex of the baby -mother or father ?



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**132.** What examples you will give to prove that Lamarckism is not correct ?



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**133.** What is the number of chromosomes in human beings?



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**134.** I carry the characters from parents and grand parents to the off springs. Who am I?



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**135.** You have observed the difference in the shape of ear. Give reasons.



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**136.** Write about the difference of contrasting characters of the position of flowers chosen by Mendel.



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**137.** What does 1: 2 : 1 indicates?



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**138.** a) Write the process of the effect of bleaching on coloured objects.



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**139.** Prepare a chart showing evolution of man through ages



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**140.** "All human beings came from Africa"-  
Explain.



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**141.** What will happen if sperm containing Y  
chromosome fertilizes the ovum?



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**142.** How are the areas of study -evolution and classification -interlinked ?



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**143.** What factors could lead to rise of a new species?



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**144.** How many characters are responsible for producing a particular character or trait, according to Mendel?



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**145.** Who discover DNA ? Write a short note on it ?



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**146.** State the law of independent assortment.



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**147.** What provides the evidences for the evolution?



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**148.** What are the differences between monohybrid cross and dihybrid cross?



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**149.** Why are the small numbers of surviving tigers a cause of worry from the point of view of genetics ?



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**150.** How do traits get expressed according to mendel?



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**151.** What do you understand about pure breeds ?



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**152.** What is F1 generation?



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**153.** If you meet a historian to clarify your doubt on 'Man first born in African continent', what type of questions will you ask him /her



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**154.** Write Phenotypic and Genotypic ratio of table given at side

Observe the following table and write

phenotypic and genotypic ratio.

♀ \ ♂	Y	y
Y	YY	Yy
y	Yy	yy

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**155.** Define and explain Variations with examples.

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**156.** Who decides the sex of the baby -mother or father ?



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**157.** Define and terms phenotype and genotype.



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**158.** What is speciation ? How it occurs ?



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**159.** How are new species evolved?



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**160.** How would you appreciate Jean Baptist Lamarck for his contribution to the biology?



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**161.** Who proposed the law of inheritance?



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**162.** Take a mirror and observe your facial features nose, chin forehead, ear lobes, hair etc. Whom do you resemble? Your father Your mother Or your grand- parents List out them in the table.



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**163.** The sex of the child is determined





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**164.** The human hand , cat paw and horse foot when studied in detail show show the same structure of ones and point towards a common origin.

i. What do you conclude from this?

ii. What is the term given to such structures?



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**165.** The human hand , cat paw and horse foot when studied in detail show show the same structure of ones and point towards a common origin.

i. What do you conclude from this?

ii. What is the term given to such structures?



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**166.** If a trait 'A' exists in 10% of a population of an asexually reproducing species and a trait 'B'

exists in 60% of the same population, which trait is likely to have arisen earlier?



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**167.** How will you appreciate the co-ordination among different organs of your body?



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**168.** What questions you will ask a palaeontologist about fossils?



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**169.** Homologous organs explain



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**170.** Fossils of the dinosaurs, ketosaurs are collected from this district.



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**171.** What is the relationship between the long neck of Giraffes and its food ?



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**172.** Asexual reproduction involves:



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**173.** What provides the evidences for the evolution?



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**174.** What provides the evidences for the evolution?



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**175.** What is the difference between phenotype and Genotype?



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**176.** What are the differences between homozygous and heterozygous?



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**177.** What is natural selection ? How does it direct the evolution ? Explain with an example.



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**178.** what is genetic drift? Explain how it provides diversity in the population. ?



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**179.** Write a short note on the law of "inheritance of acquired characters".



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**180.** Write a short note on the theory of Natural selection"



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**181.** What is your understanding about survival of the fittest ? Give some situations or examples that you observe in your surroundings.



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**182.** How are new species evolved?



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**183.** Write a brief note on homologous organs.



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**184.** What are fossils?



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**185.** The ape fossil which is supposed to be on the direct line of human evolution



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**186.** How would you appreciate Grego Johann Mendel's contribution to the genetics?



**Watch Video Solution**

**187.** What are the hypothesis assumptions and outcomes of Mendel's experiments with pea plants?



**Watch Video Solution**

**188.** How would you appreciate Jean Baptiste Lamarck for his contribution to the biology?



**Watch Video Solution**

**189.** How did Augustus Weismann disprove the theory of Inheritance of acquired character proposed by Lamarck ?



**Watch Video Solution**

**190.** How would you appreciate Charles Robert Darwin for his work on evolution?



**Watch Video Solution**

**191.** Some organisms or species adapt better and survive in a community of organisms. Why do you think this may happen ?



**Watch Video Solution**

**192.** Why man is called a moving museum of vestigial organs?



**Watch Video Solution**



**193.** What provides the evidences for the evolution?



**Watch Video Solution**

**194.** Observe flowering plants in your surroundings? Write similarities and differences between them.



**Watch Video Solution**

**195.** Write a short note on the theory of Natural selection"



**Watch Video Solution**

**196.** What should be the percentage of each type of plants in F<sub>2</sub> generation produced in dihybrid cross between pea plants with yellow, smooth seeds and green wrinkled seeds?



**Watch Video Solution**

**197.** Write your opinion on evolutionary evidences of the following information . In all the animals forelimbs are structurally similar but perform different functions according to the habitat in which they live.



**Watch Video Solution**

**198.** Who decides the sex of the baby -mother or father ?



**Watch Video Solution**

**199.** What will happen if sperm containing X chromosome fertilizes the ovum?



**Watch Video Solution**

**200.** Who decides the sex of the baby -mother or father ?



**Watch Video Solution**

**201.** In our society the women are often blamed for giving birth to daughters. Can you explain why this is not correct?



**Watch Video Solution**

**202.** Were all your traits similar to that of your parents?



**Watch Video Solution**

**203.** Keep in mind Mendel's experiments and write what you know about the following concepts?

- a. Pure breed
- b. Phenotype
- c. Genotype
- d. Alleles



**Watch Video Solution**

**204.** Write a small essay supporting that genes are the cause to form different characters in organisms.



**Watch Video Solution**

**205.** Sujatha 's in -laws worried for having daughter in her second delivery. How will you make them agree that she is not all responsible for hafing daughter?



**Watch Video Solution**

**206.** Which plant did Mendal select for his experiments?



**Watch Video Solution**

**207.** Which type of character should Mendel selected ?



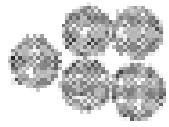
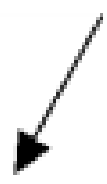
**YYRR**

**yyrr**



**YyRr (F<sub>1</sub>)**

**Self pollination**

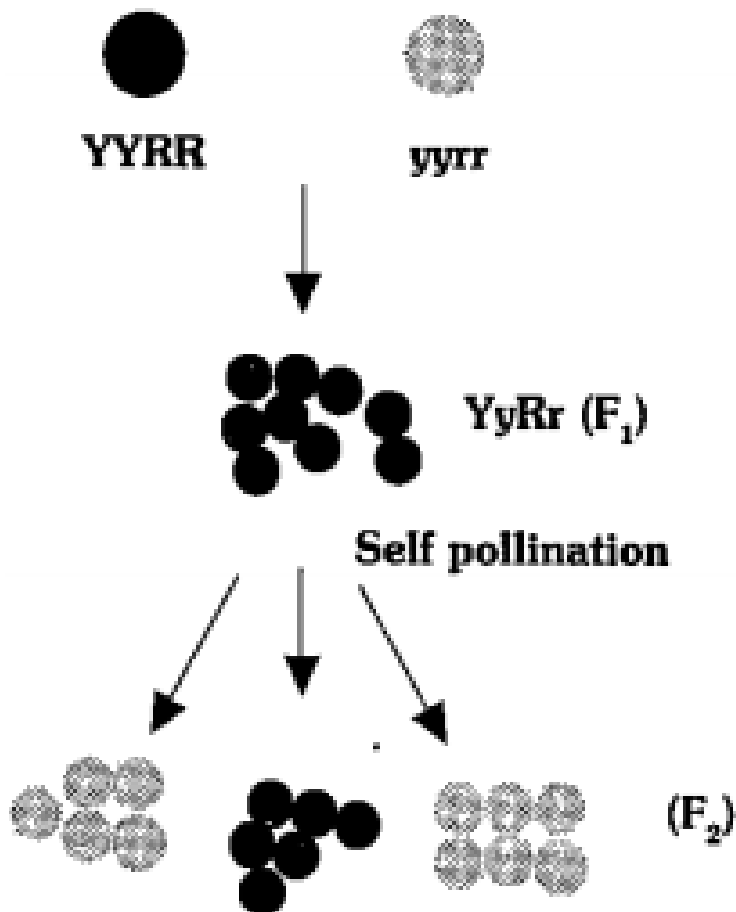


**(F<sub>2</sub>)**



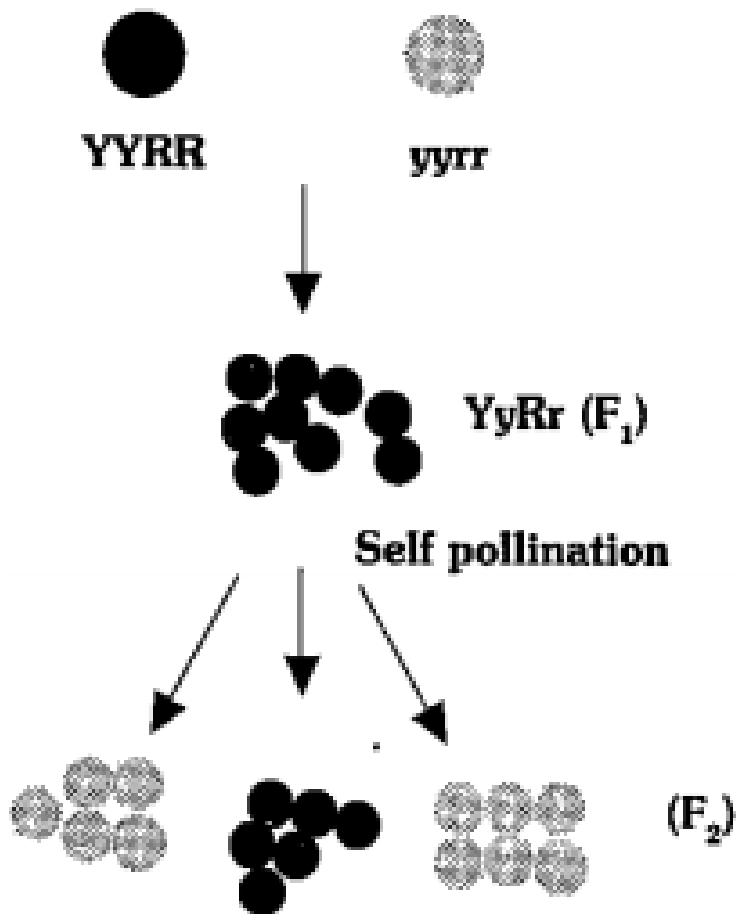
**Watch Video Solution**

208. What type of seeds are produced in  $F_1$  generation ?



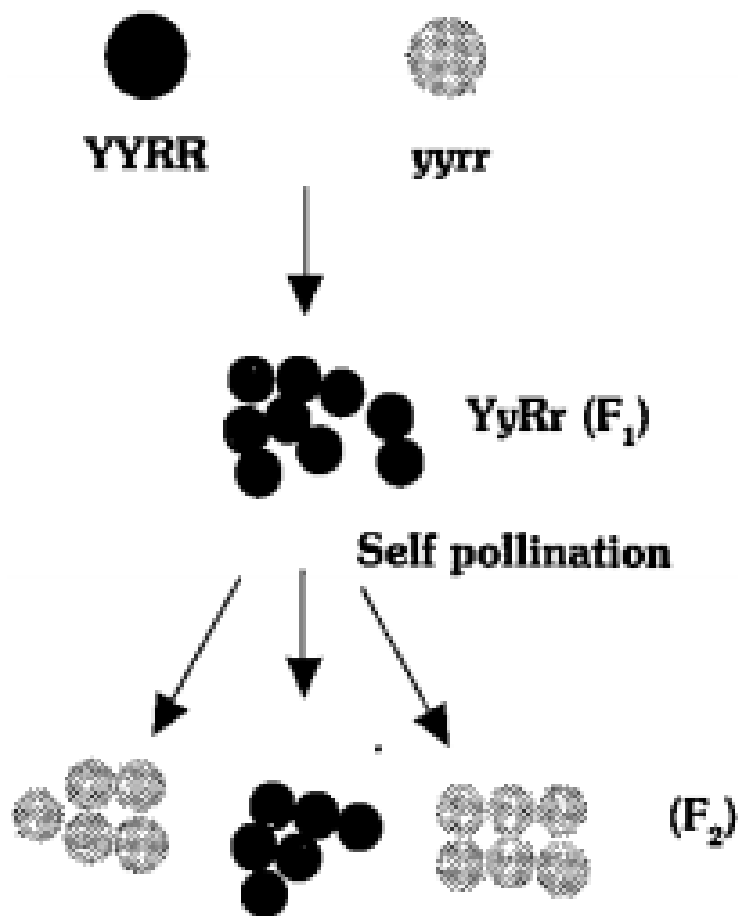
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209. In  $F_1$  generation which type of pollination takes place ?



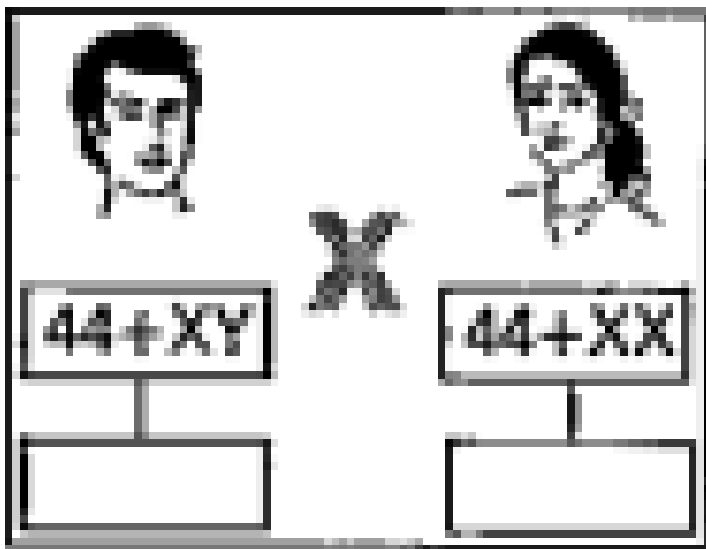
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210. What type of progeny would get in  $F_2$  ?



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211. Observe the following diagram. A newly married couple wants to give birth to a girl child. Draw the probable diagram showing chromosome transfer from parents to progeny. If their wish comes true or not? Why?



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212. Write main differences between  $F_1$  Generation  $F_2$  Generation.



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## Exercise

1. What colour of stem would you expect in their  $F_1$  progeny ?



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2. Give the percentage of stemmed plants if  $F_1$  plants are self pollinated ?



[Watch Video Solution](#)

3. In what ratio would you find the genotype GG and Gg in the  $F_2$  progeny ?



[Watch Video Solution](#)

4. What type of plant is pea ?



[Watch Video Solution](#)

5. Where and when the peas are cultivated ?



[Watch Video Solution](#)

6. In which season pea is cultivated ?



[Watch Video Solution](#)



7. What are the Vitamins & Minerals present in peas ?



**Watch Video Solution**

8. What will happen if sperm containing X chromosome fertilizes the ovum?



**Watch Video Solution**

**9.** Who decides the sex of the baby -mother or father ?



**Watch Video Solution**

**10.** Is the sex also a character or trait? Does it follow mendel's law of dominance?



**Watch Video Solution**

**11.** The process of acquiring character or trait is called .....



**Watch Video Solution**

**12.** mendel's experiment explains about .....



**Watch Video Solution**

**13.** the four characters observed in the experiments on law of independent

assortment are .....



[Watch Video Solution](#)

**14.** If we cross pollinate red flower plant with white flower we will get ..... percent of recessive trait plants.



[Watch Video Solution](#)

**15.** TT or Yy, Tt or Yy are responsible for a ..... character.



[Watch Video Solution](#)

**16.** Female baby having 23 pairs of autosomes at the age of 18 years, has how many pairs of autosomes and of sex chromosomes?



[Watch Video Solution](#)

**17.** The population grows in ..... Progression whereas food sources grow in ..... Progression.



[Watch Video Solution](#)

**18.** A goat which walks properly can't live for a long time. According to darwin, this represents .....



[Watch Video Solution](#)

**19.** forelimb of whale is for swimming whereas in horse it is used for .....



[Watch Video Solution](#)

20. The study of fishes is called



[Watch Video Solution](#)

21. Which of the following is not a variation in rose plant?

A. Coloured petals

B. Spines

C. Tendrils

D. Leaf margin

**Answer:**



**Watch Video Solution**

**22.** According to Mendel, alleles are

- A. Pair of genes
- B. Responsible for character
- C. Production of Gametes
- D. Recessive factors

**Answer:**





[Watch Video Solution](#)

**23.** Natural selection means

- A. Nature selects desirable characters
- B. Nature rejects undesirable characters
- C. Nature reacts with an organism
- D. A & B

**Answer:**



[Watch Video Solution](#)

24. Palaeontologists deal with

- A. Fossilsed Embrylogical evidences
- B. Fossil evidences
- C. Fossilsed Vetigiahn organ evidences
- D. All

**Answer:**



**Watch Video Solution**

25. The human species has genetic roots in

A. America

B. Africa

C. Australia

D. Antarctica

**Answer:**



**Watch Video Solution**

26. Which of the following gas was not present in early earth atmosphere ?

A. Oxygen

B.  $CO_2$

C.  $N_2$

D. Methane

**Answer:**



**Watch Video Solution**

27. This theory explained that life originated from non-living substances

A. The soil

B. The ground

C. The hills

D. The sea

**Answer:**



**Watch Video Solution**

**28.** Father of human genetics is

A. Mendel

B. Morgan

C. Darwin

D. Wallace

**Answer:**



**Watch Video Solution**

29. One of the following traits cant be inherited

A. colour of eyes

B. colour of skin

C. size of the body

D. nature off hair

**Answer:**



**Watch Video Solution**

30. Wing of an insect and the wing of a bird are

- A. Analogous organs
- B. Homologous organs
- C. Analeptic organs
- D. Homophobic organs

**Answer:**



**Watch Video Solution**



31. One of the following traits of the parents cannot be passed on to their future generations. This trait is

- A. Cleft chin
- B. Pointed chin
- C. Scarred chin
- D. Broad chin

**Answer:**



**Watch Video Solution**

**32.** The science of heredity is known as

- A. Embryology
- B. genetics
- C. Palaentology
- D. Zoogeography

**Answer:**



**Watch Video Solution**

**33.** The human animal which has an XY pair of chromosomes is called

- A. Hybrid
- B. Female
- C. Male
- D. Doomed

**Answer:**



**Watch Video Solution**

34. When two parents are crossed the offsprings are referred to as

A. Recessive

B. Test cross

C.  $F_1$  generation

D.  $F_2$

**Answer:**



**Watch Video Solution**

**35.** A cross between two individuals results in a ratio of 9:3:3:1 for four possible phenotypes of progeny this is an example of

- A. Dihybrid cross
- B. Monohybrid cross
- C. Test cross
- D. None

**Answer:**



**Watch Video Solution**

**36.** In human males, all the chromosomes are paired perfectly except one that is

A. X - chromosome

B. Y - chromosome

C. Small chromosome

D. A and B

**Answer:**



**Watch Video Solution**

37. A zygote which has inherited an 'X' chromosome from the father will develop into

A. Baby girl

B. Baby boy

C. Adult

D. None

**Answer:**



**Watch Video Solution**

**38.** Mendel had chosen - pairs of contrasting characters for his study on pea plants.

A. 6 pairs

B. 5 pairs

C. 7 pairs

D. 2 pairs

**Answer:**



**Watch Video Solution**



**39.** Organs which are not useful to the organisms are called

A. Homologous organs

B. Analogous organs

C. Vestigial organs

D. Digestive organs

**Answer:**



**Watch Video Solution**

40. proposed 'Natural selection' the famous theory for evolution

A. Malthus

B. Charles Lyell

C. Charles Darwin

D. Jean Baptist Lamarck

**Answer:**



**Watch Video Solution**

**41.** Name the evidences of ancient life forms which have been preserved by natural processes.

- A. Vestigial organs
- B. Analogous organs
- C. Homologous organs
- D. Fossils

**Answer:**



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42. In absolute dating of the rock/fossil is determined by

- A. Chlorine dating
- B. Nitrogen dating
- C. Hydrogen dating
- D. Carbon dating

**Answer:**



**Watch Video Solution**

**43.** The most recent ancestor of living modern man, that emerged about 34,000 years ago

A. 1.8 million

B. 40000

C. 3,00,000

D. 2.5 million

**Answer:**



**Watch Video Solution**

**44.** Wing of bat and wing of birds are the example for

A. Vestigial organs

B. Homologous

C. Analogous

D. None

**Answer:**



**Watch Video Solution**

**45.** According to Weismann's prediction, every organism undergoes two kinds of cell divisions. In mitosis, there is no change in chromosomal number ( $2n$ ) and in Meiosis, chromosomal number is reduced to half ( $n$ ).

(ii) In which cells, Meiosis takes place ?

A. 21

B. 22

C. 20

D. 23

**Answer:**



**Watch Video Solution**

**46.** How many number of pairs of autosomes are present in humans?

A. 22

B. 18

C. 23

D. 1



**Answer:**



**Watch Video Solution**

**47.** Variation in organisms occur due to

- A. Asexual reproduction
- B. Errors in DNA copying
- C. Sexual reproduction
- D. None

**Answer:**



Watch Video Solution

**48.** How many vestigial organs are present in man

A. 9+5

B. 120

C. 180

D. 240

**Answer:**



**49.** Transmission tissue is characteristic feature of

- A. Factors
- B. Chromosomes
- C. Heredity
- D. Variations

**Answer:**



50. Which chromosomes determine the sex in human beings?

A. YY

B. XZ

C. XX

D. Xy

**Answer:**



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51. identify the mis-matched pairs

1. allosomes in males-xx

2. Allosomes in females-xy

3. factors- Genes

A. `XX

B. XY

C. ZY

D. YY

**Answer:**



**Watch Video Solution**

52. What will happen if sperm containing X chromosome fertilizes the ovum?

- A. Baby girl
- B. Baby boy
- C. Cannot be divided
- D. None

**Answer:**



**Watch Video Solution**

53. Augustus Wesemann conducted his experiments on

A. Cats

B. Rats

C. Dogs

D. Deer

**Answer:**



**Watch Video Solution**

54. Weak deer cannot live long in a forest according to Darwin's principle. What concept it shows ?

- A. Evolution
- B. Acquired character
- C. Ecosystem
- D. Survival of fittest

**Answer:**



**Watch Video Solution**



55. Mendel selected a pea plant for his experiments. Mention the reasons for the selection of these plants.

A. Consists of unisexual flowers

B. Consists of bisexual flowers

C. Conducting self fertilization

D. B and C

**Answer:**



**Watch Video Solution**

56. According to Mendel, each character is expressed due to a pair of alleles or traits, which are known as.....

- A. Genes in pairs
- B. Response or the character
- C. Production of Gametes
- D. Inherent character

**Answer:**



**Watch Video Solution**

57. Transmission tissue is characteristic feature of

A. Inheritance

B. Mutations

C. Diversity

D. Environment

**Answer:**



**Watch Video Solution**

58. The diversity in the type of beaks of finches adapted to different feeding habits on the Galapagos Islands, as observed by Darwin, provides evidence for

A. Elephants

B. Giraffes

C. Rats

D. Finch birds

**Answer:**



**Watch Video Solution**

59. The characters that are expressed in the first generation are called

- A. Recessive, Dominant
- B. Dominant, Recessive
- C. Pure breed, Dominant
- D. Dominant, Pure bread

**Answer:**



**Watch Video Solution**

60. Identify the mismatched pair.

1. Phenotypic ratio of F<sub>2</sub> generation -1:2:1
2. Genotypic ratio of F<sub>2</sub> generation -3:1
3. Phenotypic ratio of dihybrid cross-9:3:3:1

A. Phenotypic ratio

B. Genotypic ratio

C. Homozygous

D. Heterozygous

**Answer:**



**Watch Video Solution**

61. We indicate yellow or green as ... and round or wrinkled as.....

A. Yy - Rr

B. yYyY

C. yY-|rR

D. YY-RR

**Answer:**



**Watch Video Solution**

**62.** Identify the scientist. They discovered the structure of DNA and got the Nobel prize

A. Watson

B. Crick

C. Both

D. None of them

**Answer:**



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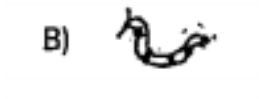


63. Amphibians, reptiles, birds and mammals indicate a common ancestry as they have

A.



B.



C.



D.

D)



**Answer:**



**Watch Video Solution**

**64.** Who is called the father of genetics?

A. mendel

B. Watson

C. Lamarck

D. Darwin

**Answer:**



**Watch Video Solution**

**65.** Palaeontologists deal with

A. Embryology

B. fossil

C. living seeds

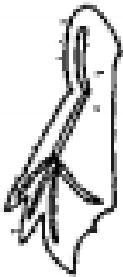
D. fruits

**Answer:**



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**66.** The following body parts are examples for.....



**Forelimb of a whale**



**wing of a bat**

**A. Homologous organs**

B. Analogous organs

C. Hemophilic organs

D. None of the above

**Answer:**



**Watch Video Solution**

**67.** The phenotype means.....

A. Externally visible characters

B. Internal characters

C. Changing characters

D. New characters

**Answer:**



**Watch Video Solution**

**68.** if both the alleles are same for a character, this condition is said to be

A. Heterozygous

B. Homozygous

C. Mixed

D. None of these

**Answer:**



**Watch Video Solution**

**69.** Each parent passes a randomly selected copy of only one of the allele to an offspring  
wchih law of mendel explain this?

A. Law of netural selection

B. Law of dominance

C. Law of independent assortment

D. Law of segregation

**Answer:**



**Watch Video Solution**

**70.** Factors or alleles of Mendel are now known as ....



**Watch Video Solution**



71. How many number of pairs of allosomes are present in humans?

A. 23

B. 1

C. 2

D. 22

**Answer:**



**Watch Video Solution**

72. How many number of pairs of allosomes are present in humans?

A. 23

B. 1

C. 2

D. 22

**Answer:**



**Watch Video Solution**

73. What will happen if sperm containing X chromosome fertilizes the ovum?

A. Boy

B. Girl

C. Cannot be divided

D. Transgender

**Answer:**



**Watch Video Solution**

74. If the sperm bearing 'Y' chromosome fertilizes the egg, the child born will not be entirely like his father, why is it so?

A. Boy

B. Girl

C. Cannot be decided

D. Transgender

**Answer:**



**Watch Video Solution**

75. Variations in offspring are caused by .

- A. Sexual reproduction
- B. Asexual reproduction
- C. Errors in DNA copying
- D. Both A & C

**Answer:**



**Watch Video Solution**

76. Which of the following is a inherited trait ?

- A. Low wight due to stravation
- B. Loss of body parts in accident
- C. Height of the individual
- D. Body growth due to excercise

**Answer:**



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**77.** Who proposed the theory of natural selction?

A. Lamarck

B. Wiesmann

C. Darwin

D. Mendel

**Answer:**



**Watch Video Solution**

**78.** In the world survey ship, Darwin travelled a number of places. Name the ship in which he travelled.

A. Titanic

B. HMS Eagle

C. HBS Beagle

D. HMS Beagle

**Answer:**



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**79.** Who wrote the book 'principles of geology'?

A. Charles Lyell



B. Charles Darwin

C. Jean Baptist Lamarck

D. Malthus

**Answer:**



**Watch Video Solution**

**80.** Which of the following statements is not true? Write it.

1. Malthus theory was written in An essay on the principles of population.

ii. The origin of species was written by Charles Lyell.

iii. The theory of Natural selection was proposed by Charles Darwin.

iv. Jean-Baptiste Lamarck proposed a theory of inheritance of acquired characters.

A. The origin of species

B. Journal of Linnaean society

C. An essay on the principles of population

D. Principles of geology

**Answer:**



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81. Journal of Linnaean Society about natural selection was published by

A. Linneaus

B. Alfred Russel

C. Lamarck

D. Augustus Weisemann

**Answer:**



**82.** Read the sentence, find the error and rewrite it. The origin of species was written by A.R Wallace.

A. Charles Lyell

B. Charles Darwin

C. Jean Baptist Lamarck

D. Malthus

**Answer:**



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**83.** Fossils of the dinosaurs, ketosaurs are collected from this district.

A. Mahaboob Nagar district

B. Adilabad

C. nagarkurnool district

D. Medak sitrict

**Answer: Krishna district**



[Watch Video Solution](#)

**84.** The most recent ancestor of living modern man, that emerged about 34,000 years ago

A. 1.8 million

B. 40000

C. 3,00,000

D. 2.5 million

**Answer:**



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**85.** complete the blanks. So metimes, vestigial organs are abruptly appear even in human beings. This phenomenon is called ....(1) Eg: baby with a tail. There are ... (2) vestigial organs in human beings.

A. 110

B. 1

C. 180

D. 7

**Answer:**



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**86.** Which one is not a vestigial organ in man?

A. pinna

B. hair on skin

C. thumb

D. appendix

**Answer:**





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87. The process of acquiring character or trait is called .....

A. Heredity

B. Inheritance

C. Evolution

D. Speciation

**Answer:**



88. If we cross pollinate red flower plant with white flower we will get ..... percent of recessive trait plants.

A. 100

B. 75

C. 25

D. 50

**Answer:**



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89. TT or Yy, Tt or Yy are responsible for a ..... character.

- A. recessive
- B. Dominant
- C. inherent
- D. all the above

**Answer:**



Watch Video Solution

90. Female baby having 23 pairs of autosomes at the age of 18 years, has how many pairs of autosomes and of sex chromosomes?

- A. Geometrical, Arithmetic
- B. Arithmetic, Geometrical
- C. Progressive, Retrogressive
- D. None of the above

**Answer:**





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91. What is the importance of DNA copying in reproduction?

- A. Evolution
- B. Heredity
- C. Variations
- D. Genetic drift

**Answer:**



[Watch Video Solution](#)

92. Darwins theory of inheritance of acquired characters than what shall be correct according to it

- A. Inheritance of \Acquired characters
- B. Natural selection
- C. Survival of the fittest
- D. Struggle for existence

**Answer:**



**Watch Video Solution**

93. what is inheritance of acquired characters?

A. Elongation of neck in |Giraffee

B. Elongation of head in Donkey

C. Development of hair on skin

D. Development of external ear

**Answer:**



**Watch Video Solution**

94. Who tested the theory of inheritance of acquired characters by his experiments on rats for 22 generations?

- A. Hugo Devris
- B. Augustus Weisemann
- C. Alfred Russel
- D. Charles Lyell

**Answer:**



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95. Journal of Linnaean Society about natural selection was published by

A. Charles Darwin and Charles Lyell

B. Augustus Weismann

C. Charles Darwin and Alfred Russel

D. Hugo Devis and Augustus Weismann

**Answer:**



**Watch Video Solution**

96. What do you name the small changes within the species?

A. Macro evolution

B. Micro evolution

C. Genetic drift

D. Evolution]

**Answer:**



**Watch Video Solution**

97. Forelimb of bat is for flying whereas in mole it is used for

A. Running

B. Grasping

C. Digging

D. Jumping

**Answer:**



**Watch Video Solution**

98. complete the blanks. Homologous organs are examples for .....(1) type of evolution. Analogous organs are examples for ....(2) type of evolution.

- A. Divergent evolution
- B. Convergent evolution
- C. Synthetion evolution
- D. Progressive evolution

**Answer:**



**Watch Video Solution**

99. Which one is not a vestigial organ in man?

A. Pinna

B. Appendix

C. Thumb

D. Hair on skin

**Answer:**



**Watch Video Solution**

**100.** Who is called as moving museum of vestigial organs'?

A. Human being

B. Giraffes

C. Camel

D. Donkey

**Answer:**



**Watch Video Solution**

**101.** What is the connecting link between reptiles and birds?

A. Duckbilled platypus

B. Archeopteryx

C. Dinosaur

D. Echidna

**Answer:**



**Watch Video Solution**

**102.** Sex linked traits in *Drosophila*  
*Melanogaster* (fruit fly) was discovered by

- A. Walter Sutton
- B. Thomas Morgon
- C. Both A and B
- D. Hugo Devries

**Answer:**



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**103.** One of the following traits cant be inherited

A. Shape of ear lobes

B. Shape of nose

C. size of the body

D. Colours of skin

**Answer:**



**Watch Video Solution**

**104.** The organs which perform different functions but have the same basic structure are known as

- A. Haemolytic organs
- B. Schizogenous organs
- C. Homologous organs
- D. Analogous organs

**Answer:**



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**105.** According to the evolutionary theory, formation of a new species is generally due to

A. Sudden creton by nature

B. Accumulaton of variations over several generation.

C. Buds formed during aswxual reproduction

D. Movement of organism from one habitat to another

**Answer:**



**Watch Video Solution**

**106.** What are the Vitamins & Minerals present in peas ?

A. A,D,E,K

B. A,C,E,AND B

C. B,C,D,K

D. A,C,DAND K

**Answer:**



**Watch Video Solution**

**107.** What are the Vitamins & Minerals present in peas ?

A. Ca, Fe, Mg

B. Mn, P

C. S and Zn

D. all the above

**Answer:**



**Watch Video Solution**

**108.** Charles Lyell wrote a book called

- A. Origin of Species
- B. Journal of Linnaean society
- C. Principles of Geology
- D. None of the above

**Answer:**



Watch Video Solution

**109.** What is the book written by charles darwin ?

A. Ingeritance of Acquired Characters

B. Principles of Population

C. Origin of Species

D. Palaeontology

**Answer:**



**110.** Acquiring change is called

- A. Heredity
- B. Inheritance
- C. Evolution
- D. Speciation

**Answer:**





**111.** Journal of Linnaean Society about natural selection was published by

- A. Charles Darwin and Charles Lyell
- B. Augustus Weismann and Charles Lyell
- C. Charles Darwin and Alfred Russel
- D. Hugo DeVries and Augustus Weismann

**Answer:**



**Watch Video Solution**

112. Gregor Mendel , a scientist belongs to country. He used ... as a laboratory.

- A. Germany, science lab
- B. Austria, Monastery garden
- C. Austria, Royal science lab
- D. Germany, Monastery garden

**Answer:**



**Watch Video Solution**

**113.** Which one is not a vestigial organ in man?

A. Femur

B. Mammary glands

C. Appendix

D. Lungs

**Answer:**



**Watch Video Solution**

**114.** Observe the following a and b statements.

All the family members have identical characters.

Differences in character within very closely related groups of organisms are referred to as variation.

A. a and b both are true

B. a is true, b is false

C. a is false b is true

D. a and b both are false.

**Answer:**



**Watch Video Solution**

**115.** Observe the a, b statements.

Yellow colour YY is pure breed

Green colour yy is also pure breed

A. Both a and b are true

B. a is true, b is false

C. a is false b is true

D. Both a and b are false

**Answer:**



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**116.** Who proved that bodily changes are not inherited?

- A. Brings changes in DNA
- B. Help in evolution
- C. Do not bring changes in DNA
- D. Brings changes in RNA

**Answer:**



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**117.** The scientist who proved incorrectness of the Theory of Lamarck by culting the tails of rats.

A. inheritable traits are not useful for heredity

B. acquiring the traits is so difficult

C. the acquired traits passed onto its  
progeny

D. the bodily changes inherit

**Answer:**



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**118.** Instead of tails, if we cut the fore limbs  
then.

A. Progeny have the forelimbs



B. Progeny won't hav the fore limbs

C. It is too difficult to form progeny

D. It is easy to form progeny

**Answer:**



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**119.** Which one of the following in analogous structures ?

A. Wings of birds, letg of a cheetah

B. Wings of bat, fins of whale

C. Wings of birds, wings of bat

D. Wings of bat, legs of horse

**Answer:**



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**120.** In which of the following patagium is found ?

A. Birds

B. Wings of Bat

C. Tail of monkey

D. Fin of Whale

**Answer:**



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**121. Appendix.....**

A. Essential in the human digestive system

B. Not useful for digestive system

C. The main part of small intestine

D. The part of large intestine

**Answer: The part of large intestine**



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**122.** We indicate yellow or green as ... and round or wrinkled as.....

A. YYRR

B. yYyY

C. yYrR

D. yy-rr

**Answer:**



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**123. Gene :DNA : Virus :.....?**

A. DNA

B. NAA

C. RNA

D. IAA

**Answer:**



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**124.** During the following variation occurs.

During reproduction

Changes in DNA transcription

Changes in RNA transcription

Synthesis of protein

A. i,ii,iii only

B. i only

C. i and ii only

D. i and iv only

**Answer:**



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## 125. Match the following

- | Group – A               | >   | Group – B                             |
|-------------------------|-----|---------------------------------------|
| i) T.H. Morgan          | ( ) | A) Origin of species                  |
| ii) Charles Darwin      | ( ) | B) Inheritance of acquired characters |
| iii) J.B. Lamarck       | ( ) | C) Drosophila Melanogaster            |
| iv) Watson and Crick    | ( ) | D) Father of Genetics                 |
| v) Gregor Johann Mendel | ( ) | E) DNA-double helix model             |



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## 126. Match the following

- | <b>Group – A</b>        | <b>Group – B</b>           |
|-------------------------|----------------------------|
| i) Appendix             | ( ) A) Human hands         |
| ii) Fore hands of whale | ( ) B) Galapagos Islands   |
| iii) Petagium           | ( ) C) Acquired characters |
| iv) Finch Birds         | ( ) D) Vestigial organs    |
| v) Giraffe neck         | ( ) E) Bat wings           |



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**127.** The variety of beaks of finches that Darwin found in Galapagos island is a clear indication of the following evolution process .

A. java, Sumitra

B. Andaman, Nicobar

C. Galapogas

D. Hawaii

**Answer:**



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**128.** The larva of frog resembles to .

A. Frog

B. Aves

C. Fish

D. Reptile

**Answer:**



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**129.** I was found in yamanapalli of Adilabad district. I was a fossil. Who am I?

A. Ecthyosaurs

B. Boronchiosaurs

C. Ketosaurs

D. Condrictes

**Answer:**



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**130.** The human species has gentic roots in

A. Australis continent

B. South America

C. Africa

D. North America

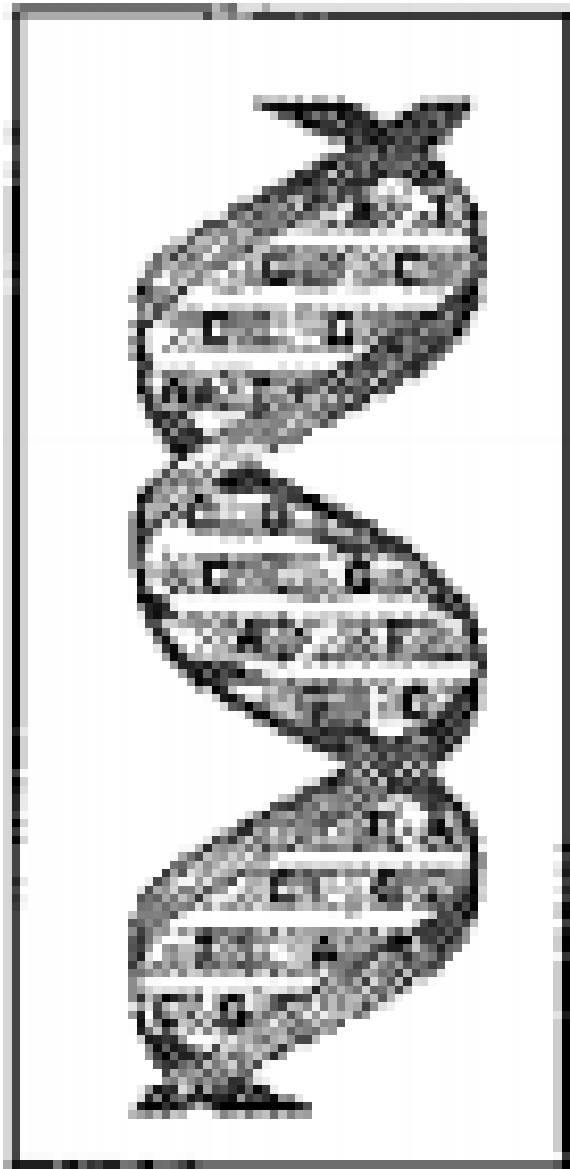
**Answer:**



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**131.** The following picture depicts the DNA.

What is the structure of DNA



A. Spherical

B. Double Helix

C. Dumbell

D. Round and longitudinal

**Answer:**



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**132.** In which of the following rocks the fossils were formed ?

A. Magnus rocks

B. Sediments

C. Modified rocks

D. All of the above

**Answer:**



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**133.** The birth of cub from tiger is ....

A. Phenotypic

B. Heredity



C. Genetic form

D. Crossing

**Answer:**



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**134.** The process in which the transmission of traits from one generation to another is called..

A. Heredity

B. Inheritance

C. Heir

D. Respect of family

**Answer:**



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**135.** Factors or alleles of Mendel are now known as ....

A. Genes

B. Heriditable factors

C. Factors

D. Traits

**Answer:**



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**136.** In human beings DNA controls the characters whereas in viruses . controls the character

A. RNA

B. ABA

C. Synthetic DNA

D. Retro RNA

**Answer:**



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**137.** Which of the following is not the base of Nitrogen in DNA?

A. Adenine

B. Guanine

C. Uracil

D. Thymine

**Answer:**



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**138.** The number of autosomes in human beings

A. 23 pairs

B. 22 pairs

C. 1 pair

D. 46 pairs

**Answer:**



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**139.** What do you call the changes in the frequency of genes in small populations?

A. Genetic change

B. Alleles

C. Natural selectio

D. Genetic drift

**Answer:**



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**140.** One person become obese along with his age. Is this obese character also be transmitted to his progeny ?

A. Can't say

B. Not transmitted

C. Compulsorily transmitted

D. May be expressed in  $F_2$  generation

**Answer:**



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**141.** The scientist who proved incorrectness of the Theory of Lamarck by culting the tails of rats.



A. Charles Darwin

B. A.R. Wallace

C. Huxlee

D. Augustus Weismann

**Answer:**



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**142.** Explain the Darwin's theory of Natural selection with an example. What do you

understand by the term natural selection ?

Write drwin's theory of evolution.

A. Augustus Weismann

B. Charles Darwin

C. Malthus

D. Charles Lyell

**Answer:**



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**143.** How can one change adopted perform different functions?



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**144.** Why are traits acquired during the lifetime of an individual not inherited?



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**145.** Write the Darwin's theory of evolution in a nutshell?



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**146.** What is meant by law of dominance? To know more about law of dominance, what kind of questions you will ask?



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147. What is the genotypic ratio of monohybrid cross?

A. 0.043090277777778

B. 0.167361111111111

C. 0.125694444444444

D. 1 : 3 , 1

**Answer:**



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**148.** the four characters observed in the experiments on law of independent assortment are .....

A. Watson

B. Lamarck

C. Mendel

D. Darwin

**Answer:**



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**149.** Daltonism in human being

A. XX

B. XY

C. ZX

D. YY

**Answer:**



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**150.** Who decides the sex of the baby -mother or father ?

- A. gamete from father
- B. gamete from grandfather
- C. gamete from mother
- D. family history

**Answer:**



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**151.** The diversity in the type of beaks of finches adapted to different feeding habits on the Galapagos Islands, as observed by Darwin, provides evidence for

A. Galapagos islands

B. Indonesian islands

C. Andaman islands

D. Maldives

**Answer:**



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152. Organs which are not useful to the organisms are called

A. Homologous organs

B. Analogous organs

C. Vestigial organs

D. Digestive organs

**Answer:**



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**153.** A few statements with regard to sexual reproduction are given below

(i) Sexual reproduction does not always require two individuals

(ii) Sexual reproduction generally involves gametic fusion

(iii) Meiosis never occurs during sexual reproduction

(iv) External fertilisation is a rule during sexual reproduction

Choose the correct statements from the options below

- A. Genetic drift
- B. Genetic recombination
- C. Mutations
- D. All of the above

**Answer:**



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**154.** complete the blanks. Homologous organs are examples for .....(1) type of evolution.

Analogous organs are examples for ....(2) type of evolution.

- A. Divergent evolution
- B. Convergent evolution
- C. Resurgent evolution
- D. Recessive evolution

**Answer:**



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**155.** If the alleles are different for a character, then this condition is said to be ?

A. Heterozygous

B. Homozygous

C. Opposite

D. None of these

**Answer:**



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**156.** One of the allele is dominant over other  
which law of mendel explain this?

- A. Law of segretion
- B. Law of independent assortment
- C. Law of dominance
- D. Law of natural selection

**Answer:**



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157. chromosomes whose number and morphology do not differ between males and females of a species are called....

A. allosomes

B. autosomes

C. homosomes

D. heerosomes

**Answer:**



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**158.** Which of the following is a inherited trait ?

- A. Low wight due to stravation
- B. Loss of body parts in accident
- C. Height of the individual
- D. Body growth due to excercise

**Answer:**



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**159.** indentify the scientist. He was the first person to propose the theory of evolution. He took girffee to explain his theory.

A. Mendel

B. Darwin

C. Lamarck

D. Weiseman

**Answer:**



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**160.** How would you appreciate Jean Baptist Lamarck for his contribution to the biology?

- A. Malthus theory
- B. Natural selection
- C. Inheritance of acquired characters
- D. Survival of the fittest

**Answer:**



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**161.** what is the study of the development of an organism from egg to adult stage?

- A. Embryology
- B. Palaeontology
- C. Geology
- D. Zoology

**Answer:**



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**162.** What is the method used to determine the age of the fossil ?

A. Hydrogen dating

B. Nitrogen dating

C. Oxygen dating

D. Carbon dating

**Answer:**



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**163.** Observe the following a and b statements.

All the family members have identical characters.

Differences in character within very closely related groups of organisms are referred to as variation.

A. Mutation

B. Evolution

C. Heredity

D. Variations

**Answer:**



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**164.** Male is responsible for sex determination of baby - do you agree ? If so write your answer with a flow chart.



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**165.** How does sex determination happen in human?



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**166.** Write about dihybrid cross with the help of checker board?



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**167.** which type of evolution do we understand from homologous organs?



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