

# جريدة الدستور

## Final Revision

Second term 2023

First secondary

# Biology

Prepare by

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### Choose the correct answer:

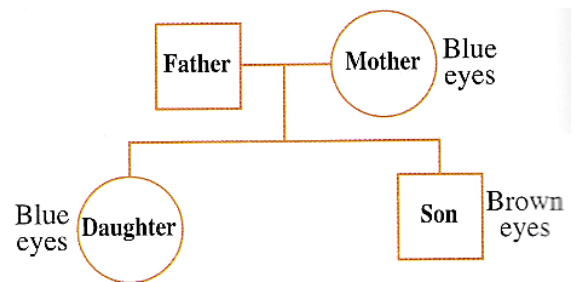
1- In the opposite figure, if you know that the brown eyes gene (B) dominates over the blue eyes gene (b), what is the probable genotype for the colour of the father's eyes ?

a) bb

b) Bb

c) BB

d) BW



Answer: (b)

2- Which of the following organisms is from the prokaryotic autotrophs ?

a) Euglena.

b) Nostoc.

c) Riccia.

d) Chlamydomonas

Answer: (b)

**3- The two scientists Sutton and Boveri have contributed in genetics through .....**

- a) determining the structure of DNA
- b) explaining the sex-linked traits.
- c) explaining the effect of environment on the phenotypes of the living organism.
- d) studying the characteristics of chromosomes.

Answer: (d)

**4- Each of Funaria and bread mould fungus shares in .....**

- a) being heterotrophic.
- b) reproducing asexually by regeneration.
- c) containing rhizoids.
- d) consisting of filaments adhering together by a gelatinous membrane.

Answer: (c)

**5- When crossing a colour-blinded woman with a healthy man, it is assured that ....**

- a) all sons are normal.
- b) the son has the same phenotype of the father.
- c) all daughters are normal.
- d) the daughter has the same genotype of the mother.

Answer: (c)

**6- Which of the following is from the fungi that their spores are formed inside sporangia ?**

- a) Bread mould fungus.
- b) Mushroom.
- c) Penicillium.
- d) Yeast fungus.

Answer: (a)

**7- In which of the following hereditary cases the phenotype doesn't express the genotype?**

- a) Yellow-coloured fur mice.
- b) Grey-coloured fur mice.
- c) Green seedlings of the corn plant.
- d) Colour blindness in males.

Answer: (c)

**8- Mule belongs to order .....**

- a) Carnivora.
- b) Perissodactyla.
- c) Artiodactyla.
- d) Primates.

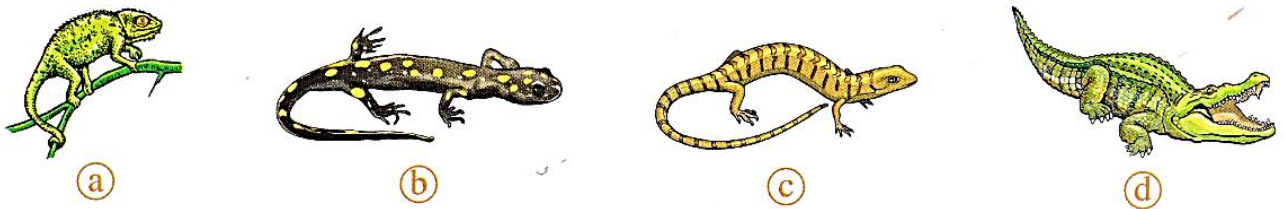
Answer: (b)

9- The genes controlling the inheritance of (Rh) factor don't obey the law of independent assortment of genetic factors, because they .....

- a) are found on one pair of chromosomes.
- b) are carried on a sex chromosome.
- c) are carried on chromosomes pair no. (9).
- d) are found on different chromosomes.

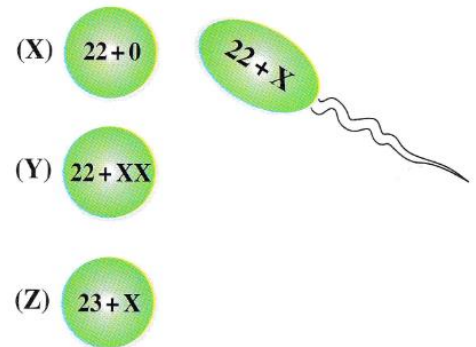
Answer: (a)

10- In which of the following living organisms the fertilization is external?



Answer: (c)

11- Study the opposite figures which represent the ova types (X), (Y) and (Z) and a sperm, which of the following is correct about the resultant of the fertilization between the sperm and one of these ova ?



- a) A female with Down's syndrome will be produced from the fertilization of ovum (X).
- b) A female with Turner's syndrome will be produced from the fertilization of ovum (Z).
- c) A female with aneuploidy will be produced from the fertilization of ovum (Y).
- d) A male with Down's syndrome will be produced from the fertilization of ovum (X).

Answer: (c)

12- Study the following table which represents the characters of three vertebrates (X), (Y) and (Z):

Characters / Animal	From cold-blooded	From warm-blooded	The limbs (if present) end with 4 digits	The limbs (if present) end with 5 digits
(X)	.....	√	.....	√
(Y)	√	.....	.....	√
(Z)	.....	√	√	.....

Which of the following is correct about the classes to which those animals (X), (Y) and (Z) belong respectively?

- a) Aves / Reptilia / Mammalia.
- b) Mammalia / Reptilia / Aves.
- c) Mammalia / Aves / Amphibia.
- d) Amphibia / Aves / Reptilia.

Answer: (c)

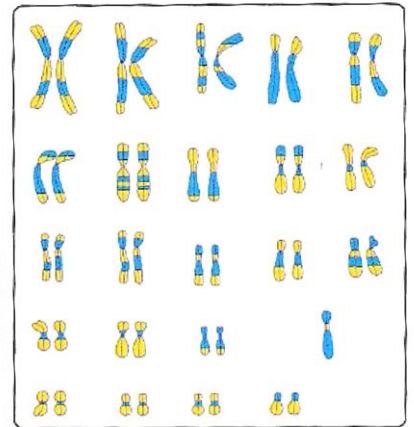
13- Which of the following is from the reasons of classifying the sponge as an animal ?

- a) Being immobile.
- b) Being heterotrophic.
- c) It reproduces sexually by gametes.
- d) Being multicellular.

Answer: (b)

14- The opposite figure shows the karyotype for a somatic cell of .....

- a) a female suffering from polyploidy.
- b) a normal female.
- c) a female with Turner's syndrome.
- d) a female with Down's syndrome.



Answer: (c)

15- In the taxonomic hierarchy, which of the following levels contains the largest number of living organisms?

- a) Family
- b) Species
- c) Order
- d) Genus

Answer: (c)

16- If a white blood cell in a female pussycat contains 38 chromosomes, what is the number of chromosomes in its ovum ?

- a) 18
- b) 19
- c) 38
- d) 76

Answer: (b)

17- Which of the following organisms don't reproduce by spores?

- a) Ascomycetes.
- b) Ferns.
- c) Sporozoans.
- d) Sponges.

Answer: (d)

18- When the crossing of two green pea plants carrying white flowers takes place, what is the percentage of purple flowers in the resulted generation ?

- a) 100 %
- b) 75 %
- c) 25 %
- d) 0 %

Answer: (d)

**19- Which of the following plants forms flowers ?**

- a) Pinus.                      b) Polypodium.                      c) Adiantum.                      d) Lily.

Answer: (d)

**20- The individual whose genotype is (AaBb) gives a number of gametes, some of them carry one dominant gene only, their percentage is .**

- a) 100 %                      b) 75 %                      c) 50 %                      d) 25 %

Answer: (c)

**21- Which of the following living organisms its(their) cell wall contain(s) silica substance?**

- a) Archaeobacteria.                      b) Eubacteria.                      c) Diatoms.                      d) Mushroom.

Answer: (c)

**22- What is the blood group of the person whose blood cells don't contain antigens?**

- a) ABRh<sup>+</sup>                      b) ORh<sup>-</sup>                      c) ABRh<sup>-</sup>                      d) ORh<sup>+</sup>

Answer: (b)

**23- Which of the following represents a difference between rhinoceros and deer ?**

- a) The class to which they belong.  
b) The presence of horny hooves for each toe.  
c) The number of toes.  
d) Suckling their young.

Answer: (c)

**24- Which of the following is the reason for classifying each of Nostoc and Euglena in two different kingdoms?**

- a) Nostoc is unicellular, while Euglena is multicellular.  
b) Nostoc is prokaryotic, while Euglena is eukaryotic.  
c) Nostoc is autotrophic, while Euglena is heterotrophic.  
d) Nostoc doesn't contain green plastids, while Euglena contains green plastids.

Answer: (b)

**25- There is a recessive lethal gene in cows, what is the percentage of the normal individuals that produced form the crossing of two hybrid individuals of this gene?**

- a) 0 %                      b) 25 %                      c) 50 %                      d) 75 %

Answer: (d)

26- Which of the following statements is correct?

- a) All the aquatic animals breathe by gills.
- b) All fishes have air bladder.
- c) Whales breathe by gills.
- d) The bony fishes share the embryonic stages of amphibians in the method of respiration.

Answer: (d)

27- If a crossing occurs between two green pea plants that have a heterozygous pair of genetic traits and the resulted offspring contains 200 plants. So, what is the approximate number of the heterozygous plants ?

- a) 50
- b) 100
- c) 150
- d) 200

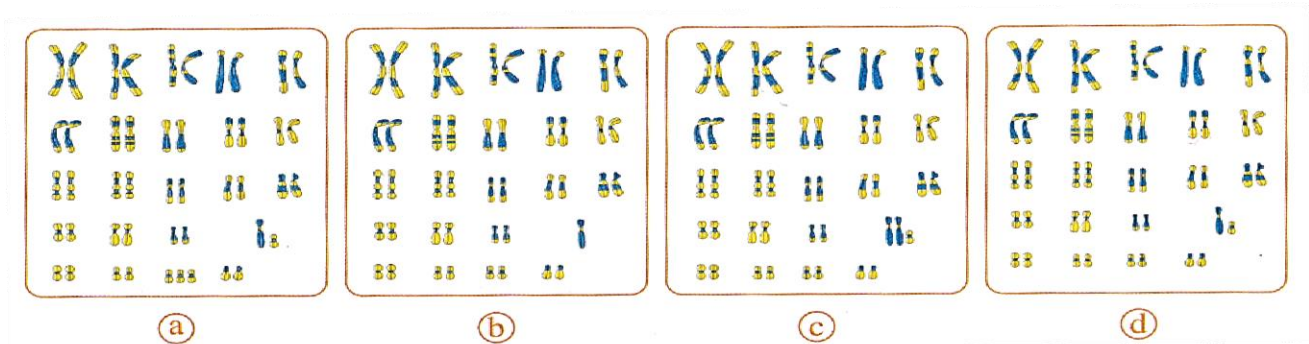
Answer: (b)

28- Which of the following statements is wrong ?

- a) All mammals suckle their young.
- b) Some mammals lay eggs.
- c) All mammals have canines.
- d) All mammals breathe by lungs.

Answer: (c)

29- Which of the following karyotypes doesn't express an abnormal chromosomal case in human ?



Answer: (d)

30- What is the ratio between the number of phenotypes for the dominant lethal genes to that of the recessive lethal genes respectively when a crossing among hybrid individuals takes place?

- a) 1 : 1
- b) 2 : 1
- c) 1 : 2
- d) 1 : 3

Answer: (b)

31- What is the difference between bony fishes and the adult stage of amphibians ?

- a) The sex separation.
- b) The type of fertilization.
- c) The method of respiration.
- d) The thermal equilibrium .

Answer: (c)

32- The eggs laying trait in females is considered an example for ..... traits.

- a) sex-linked                      b) sex-influenced                      c) sex-limited                      d) mendelian

Answer: (c)

33- Two parents differ in the blood groups and have the same Rhesus factor, they give birth to a son whose blood group and Rhesus factor are different from his parents, which of the following represent the genetic structure of both parents blood groups and Rhesus factor ?

- a)  $BBRh^+Rh^+ / AARh^+Rh^+$                       c)  $BORh^+ Rh^- / AORh^+ Rh^-$   
b)  $BBRh^- Rh^- / AORh^- Rh^-$                       d)  $OORh^+ Rh^- / ABRh^+ Rh^+$

Answer: (c)

34- Which of the following statements is correct about the organisms of kingdom Protista ?

- a) The majority have complex structure, as they are multicellular.  
b) Their genetic material isn't surrounded by a nuclear membrane.  
c) Some of them are similar to plants in the presence of green plastids.  
d) All of them are pathogens.

Answer: (c)

35- If you know that the number of chromosomes in the skin cell of a toad is 26 chromosomes, what is the number of sex chromosomes in the sperm?

- a) 13 chromosomes                      c) 2 chromosomes  
b) 12 chromosomes                      d) One chromosome

Answer: (d)

36- Through which of the following the chromosomes can't be studied ?

- a) White blood corpuscles.                      c) Mature red blood corpuscles.  
b) Nerve cells.                      d) Skin.

Answer: (c)

37- Which of the following plants doesn't form seeds ?

- a) Cactus.                      b) Pinus.                      c) Cotton.                      d) Polypodium.

Answer: (d)

38- Which of the following is correct about the opposite organism?

- a) It belongs to subclass Eutheria.  
b) It gives birth to its young and suckles them its milk.  
c) It gets rid of urine and faeces from the same opening.  
d) It belongs to order Carnivora.



Answer: (c)

**39- What is the ratio between the number of chromosomes in a somatic cell to that in a gamete cell for the same organism?**

- a) 1 : 1                      b) 2 : 1                      c) 1 : 2                      d) 3 : 1

Answer: (b)

**40- What is the arrangement of the class in the taxonomic hierarchy of living organisms?**

- a) It precedes the family and follows the genus.  
b) It precedes the species and follows the phylum.  
c) It precedes the order and follows the phylum.  
d) It precedes the kingdom and follows the family.

Answer: (c)

**41- What is the ratio of the second generation individuals when crossing two pure individuals that differ in a pair of allelomorphic mendelian characters?**

- a) 3 : 1                      b) 1 : 2 : 1                      c) 9 : 7                      d) 9 : 3 : 3 : 1

Answer: (a)

**42- Which of the following living organisms its nucleus isn't surrounded by a nuclear membrane?**

- a) Paramecium.                      b) Diatoms.                      c) Plasmodium.                      d) Nostoc.

Answer: (d)

**43- Which of the following individuals is produced from the fertilization of a normal sperm (that doesn't contain the chromosome essential for life) with a normal ovum?**

- a) A normal male.                      c) A normal female.  
b) A male with Down's syndrome.                      d) A female with Down's syndrome.

Answer: (a)

**44- Which of the following is(are) considered from the marine weeds that consist of filaments adhering together by a gelatinous coat?**

- a) Spirogyra.                      b) Fucus.                      c) Polysiphonia.                      d) Diatoms.

Answer: (c)

**45- If the blood group of the parents of the father is (O), which blood group of the following is impossible to be found among the grandchildren's blood groups?**

- a) (A).                      b) (B).                      c) (O).                      d) (AB).

Answer: (d)



46- Which of the following can't inherit the haemophilia gene from a haemophilic father?

- a) Granddaughters.      b) Grandsons.      c) Daughters.      d) Sons.

Answer: (d)

47- Which of the following (are) from the higher vertebrates that live in water?

- a) Lamprey.      b) Dolphins.      c) Sharks.      d) Ray fish.

Answer: (b)

48- A colour-blinded man whose blood group is (O) married to a normal woman whose blood group is (B), and gave birth to a son whose blood group is (O) and suffers from colour blindness. Which of the following represents the genotypes of parents ?

- (a)  $BB\overset{C}{X}\overset{C}{X}$  and  $OO\overset{c}{X}Y$       (c)  $BB\overset{C}{X}\overset{c}{c}$  and  $OO\overset{c}{X}Y$   
(b)  $BO\overset{CC}{XX}$  and  $OO\overset{c}{X}Y$       (d)  $BO\overset{C}{X}\overset{c}{c}$  and  $OO\overset{c}{X}Y$

Answer: (d)

49- A man married a woman and gave birth to a son with infantile dementia and lived for few years then died, which of the following represents the genotypes of the parents and the infected son ?

	Father	Mother	Son
(a)	Aa	Aa	AA
(b)	Aa	Aa	aa
(c)	AA	Aa	AA
(d)	Aa	aa	aa

Answer: (a)

50- What is the similarity between the somatic cells and gametes of the living organism?

- a) The type of division from which they are produced.  
b) The number of chromosomes that they carry.  
c) The location of chromosomes in each of them.  
d) The karyotype of each of them.

Answer: (c)

51- Two living organisms belong to the same phylum and differ in the order, therefore it is expected that they are classified under the same .....

- a) genus.      b) species.      c) class.      d) family.

Answer: (c)

**52- What is the change that occurs when the sequence of nucleotides of a certain gene in DNA molecule changes?**

- a) The number of chromosomes of the living organism.
- b) The protein that is responsible for the appearance of a certain genetic character.
- c) The karyotype of the living organism.
- d) All the genetic traits of the living organism.

Answer: (b)

**53- In the opposite table, when crossing a pea plant carrying the genotype no. (2) with a plant carrying the same genotype, it is probable that some of the resulted individuals have genotypes identical to that of the individuals no .....**

- a) (1) and (3).
- b) (1) and (4).
- c) (3) and (5).
- d) (4) and (5).

♀ \ ♂	YS	Ys	yS	ys
yS	.....	(1)	.....	(2)
ys	(3)	.....	(4)	(5)

Answer: (d)

**54- What is the blood group that receives blood from all the other groups?**

- a) (AB<sup>+</sup>).
- b) (AB<sup>-</sup>).
- c) (O<sup>+</sup>).
- d) (O<sup>-</sup>).

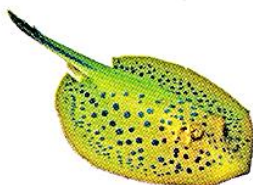
Answer: (a)

**55- On crossing two strains of pea flower (sweet pea) plant, all the flowers of the first generation were pink-coloured, what is the reason for that?**

- a) The convergence of a pair of dominant genes with a pair of recessive genes.
- b) The convergence of a dominant gene with the other recessive genes.
- c) The convergence of a dominant gene from each pair of the two pairs of genes.
- d) The convergence of all recessive genes together.

Answer: (c)

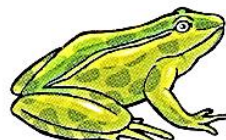
**56- Which of the following living organisms breathes by two different ways during its life cycle?**



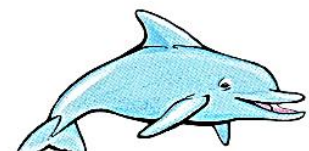
(a)



(b)



(c)



(d)

Answer: (c)

**57- Which of the following represents the percentage of the resulted offspring that produced from the crossing of a red-eyed male *Drosophila* with a white-eyed female *Drosophila*?**

- a) 25% white-eyed males, 25% white-eyed females, 25% red-eyed males and 25% red-eyed males.
- b) 50% white-eyed males and 50% pure red-eyed females.
- c) 50% white-eyed males and 50% hybrid red-eyed females.
- d) 25% white-eyed males, 25% red-eyed males and 50% red-eyed females.

Answer: (c)

**58- If you know that the albinism character is a mendelian character that is characterized by the absence of melanin pigment from the skin, hair and eyes, which is a recessive character, what is the probability of giving birth to normal offspring when both parents don't have the melanin pigment?**

- a) 0%
- b) 50%
- c) 75%
- d) 100%

Answer: (a)

**59- What is the difference between pigeon and bat ?**

- a) The thermal stability.
- b) The modification of the forelimbs.
- c) The method of respiration.
- d) The class to which they both belong.

Answer: (d)

**60- When a crossing between two green pea plants takes place, the resulted generation contains long and short-stemmed plants with equal ratios. So, what are the parents' genotype?**

- a)  $tt \times tt$
- b)  $Tt \times tt$
- c)  $TT \times tt$
- d)  $Tt \times Tt$

Answer: (b)

**61- What is the correct sequence of the following living organisms from the lower advanced to the higher advanced ?**

- a) Polypodium / Riccia / Diatoms / Nostoc.
- b) Diatoms / Riccia / Polypodium / Nostoc.
- c) Nostoc / Diatoms / Riccia / Polypodium.
- d) Riccia / Nostoc / Diatoms / Polypodium.

Answer: (c)

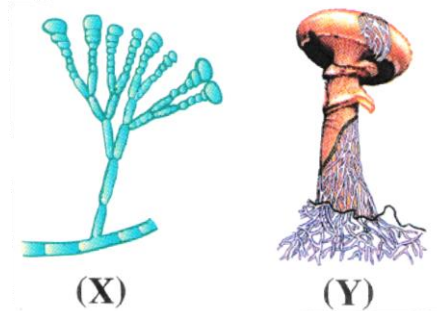
62- Which of the following doesn't exist in each of the somatic cell nucleus and the male gamete nucleus in human respectively ?

- a) (2n) chromosomes / (n) chromosomes.
- b) 46 DNA molecules / 23 DNA molecules.
- c) 46 chromosomes / 23 chromosomes.
- d) 44 chromosomes / 22 chromosomes.

Answer: (d)

63- In which does the living organism (X) share with the living organism (Y) ?

- a) They belong to the same division.
- b) They are formed of segmented hyphae.
- c) They have the same number of chromosomes.
- d) They contain spores that produced inside asci.



Answer: (b)

64- If two individuals that have pure allelomorphic traits get married, their characters don't appear on the resulted offspring. So, what is the probable case that expresses that?

- a) Complete dominance.
- b) Lack of dominance.
- c) Complementary genes.
- d) Lethal genes.

Answer: (b)

65- Which of the following living organisms is not considered from the higher algae ?



Answer: (c)

66- A woman gives birth to 4 children, each of them has different blood group from the other. So, what are the genotypes for the parents' blood groups?

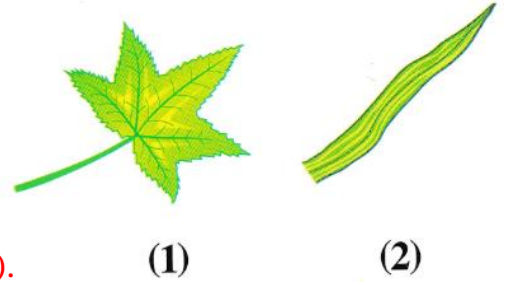
- a) (AB) and (AO).
- b) (AB) and (BO).
- c) (AB) and (OO).
- d) (AO) and (BO).

Answer: (d)

67- Study the two opposite figures no. (1) and (2), then answer:

Which of the following statements is correct?

- a) The roots of figure no. (1) plants are fibrous.
- b) The vascular bundles of figure no. (2) plants are arranged in a ring inside the stem.
- c) Maize plant belongs to the plants of figure no. (1).
- d) The flowers of figure no. (2) plants have trimerous floral whorls or their multiplies.



Answer: (d)

68- Which of the following genetic cases whose appearance depends on the presence of a dominant gene in human?

- a) Baldness.
- b) Colour blindness.
- c) Infantile dementia.
- d) Haemophilia.

Answer: (a)

69- A woman has pure brown eyes and carrier to haemophilia disease gene married to a blue-eyed man suffering from haemophilia. Which of the following are the possible genotypes of the children ?

[knowing that the brown eyes gene (B) dominates over the blue eyes gene (b)].

(a)  $BB\overset{Hh}{XX}$

(b)  $Bb\overset{HH}{XX}$

(c)  $BB\overset{h}{XY}$

(d)  $Bb\overset{H}{XY}$

Answer: (b)

70- Which of the following is considered correct about Euglena?

- a) It belongs to kingdom Plantae, because it contains chloroplasts.
- b) It belongs to kingdom Animalia, because it has a mean of locomotion.
- c) It is considered from protozoans, because it is unicellular.
- d) It is autotrophic, because it contains chloroplasts.

Answer: (b)

71- During the pregnancy, when will the embryo with Klinefelter's syndrome start to form the gonad's cells?

- a) After about a month.
- b) After about a month and half.
- c) After about two months.
- d) After about three months.

Answer: (b)