



# BIOLOGY

## BOOKS - SARAS PUBLICATION

### QUESTION PAPER MARCH 2020 (2)

#### Exercise

1. In the E-waste generated by the Mobile Phones, which among the following metal is most abundant?

A. Gold

B. Copper

C. Silver

D. Palladium

**Answer:**



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**2. Name the instrument used to monitor foetal heart rate**

A. Foetoscope

B. EEG

C. Amniocentesis

D. CVS

**Answer:**



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**3.** Which one of the following bacterium is not involved in ethanol production?

- A. *Sarcina ventriculi*
- B. *Saccharomyces cerevisiae*
- C. *Ideonella sakaiensis*
- D. *Zymomonas mobilis*

**Answer:**



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4. B cells that produce and release large amounts of antibody re called

A. Killer cells

B. Memory cells

C. Basophils

D. Plasma cells

**Answer:**



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5. Which one of the following menstrual irregularities is correctly matched?

A. Oligomenorrhoea - Excessive

menstruation

B. Menorrhagia - Painful menstruation

C. Amenorrhoea - Absence of menstruation

D. Dysmenorrhoea - Irregularity of

menstruation

**Answer:**



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6. ----- and ----- proposed the classical model of Lac operon to explain gene expression and regulation in E.coli.

A. Hershey, Chase

B. Jacob, Monod

C. Meeselson, Stahl

D. Wastson, Crick

**Answer:**



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7. XX-XO type of sex determination is in

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- A. Both (A) and (R) are true and (R) is not the correct explanation for (A).
- B. Both (A) and (R) are false.
- C. (A) is true and (R) is false
- D. Both (A) and (R) are true and (R) is the correct explanation for (A).

**Answer:**







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8. Which of the following chromosome has the highest gene density?

A. Chromosome 'Y'

B. Chromosome I

C. Chromosome 19

D. Chromosome 13

**Answer:**



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9. The first clinical gene therapy was done for the treatment of

A. SCID

B. AIDS

C. Cancer

D. Cystic Fibrosis

**Answer:**



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**10.** . Find the true and false statements from the following: i) Plasmodium vivax is a digenic parasite ii) The life cycle of Plasmodium involves 3 phases namely, schizogony, polygony and sporogony iii) The large schizont shows yellowish-brown pigmented granules called Schuffners granules iv) Plasmodium infection leads to Lysis of white blood cells results in cycles of fever and other symptoms.

A. (i)-True, (ii)-True, (iii)-False, (iv)-True

B. (i)-True,(ii)-True, (iii)-False, (iv)-False

C. (i)-True, (ii)-False,(iii)-True, (iv)-False

D. (i)-False, (ii)-True, (iii)-False, (iv)-True

**Answer:**



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**11.** Which one of the following is not coming under insitu conservation?

A. Biosphere Reserve

B. Sanctuaries

C. National Parks

D. Zoological Park

**Answer:**



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12. Paedogenetic parthenogenesis is seen  
in \_\_\_\_\_

A. Aphis

B. Honey bees

C. Solenobia

D. Gall fly

**Answer:**



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**13.** A population will not exist in Hardy-Weinberg equilibrium if

A. The population is large

B. Individuals mate selectively

C. There are no mutations

D. There is no migration

**Answer:**



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**14.** Which of the following group of animals are the common fauna of the Thar deserts?

A. Gaur, Rhino, Antelope

B. Jack rabbits, Kangaroo rats, Pocket mice

C. The blackbuck, The Indian Spiny-tailed

lizard, The white-footed fox

D. Bobcat, Timber wolf, Black bear

**Answer:**



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**15.** If the child's blood group is 'O' and father's blood group is 'A' and mother's blood group is 'B' the genotype of the parents will be



A.  $I^A I^O$  and  $I^B I^O$

B.  $I^A I^A$  and  $I^B I^O$

C.  $I^O I^O$  and  $I^B I^B$

D.  $I^A I^B$  and  $I^O I^O$

**Answer:**



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**16.** What is colostrum? Write its significance.



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**17.** Placenta is an endocrine tissue. Justify.



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**18.** Write a note on Huntington's chorea .



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**19.** Differentiate between divergent evolution and convergent evolution with one example for each.



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**20.** What is known as cytological isolation?



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**21.** How does chemical mediators act as physiological barriers?



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**22.** Write the key features of organic farming.



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**23.** Red list of Red Data book consists of eight categories of species. Mention them.



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**24.** By 2025, two thirds of the world's Population may face water shortages.



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**25. How can we reduce water pollution?**



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**26. What is regeneration? Explain its types.**



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**27.** Describe any three of the Viral STI and mention their symptoms.



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**28.** Write the objectives of Human Genome project.



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**29.** Compare and contrast bacillary dysentery and amoebic dysentery.



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**30.** Explain Commensalism with an example.



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**31.** Explain the role of cry-genes in genetically modified crops.



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**32.** What are the possible risks of GMOs ?



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**33.** What would Earth be like without the greenhouse effect?



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**34.** Imagine that one day the water on the whole earth disappeared. Give some consequences that we would face.



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**35.** Explain the role of oxytocin and relaxin in parturition and lactation.



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**36.** What is infertility and write its causes.



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**37.** Give an account of allosomal abnormalities in human beings.



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**38.** Darwin's finches and Australian marsupials are suitable examples of adaptive radiation-

Justify the statement.



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**39.** List the salient features of genetic code.



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**40.** Explain the process of transcription in eukaryotes.



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**41.** How is the amplification of a gene sample of interest carried out using PCR ?



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**42.** What are the two most prevalent helminthic diseases in human beings? Explain them.



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**43.** Explain the exotic species invasion.



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**44.** What are the ways by which organisms respond to abiotic factors ?



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