



# BIOLOGY

## BOOKS - HT Olympiad Previous Year Paper

### NSO QUESTION PAPER 2020-21 SET A

Science

1. Identify the agricultural tool shown in the figure and select the incorrect statement

regarding it.



A. This tool is used to separate the grain from the chaff.

B. This tool is used for sowing seeds at equal distances and proper depth.

C. This tool ensures that seeds get covered by the soil after sowing.

D. This tool has a funnel shaped opening leading to long tubes.

**Answer: A**



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**2. Study the given correlation.**

Heat treatment: Sterilisation :: Vaccination : X

Here, X refers to \_\_\_\_\_ .

A. Pasteurisation

B. Immunisation

C. Fertilisation

D. Inoculation

**Answer: B**



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**3.** Read the given statements and select the option that correctly fills the blanks in any two of them.

(i) Species of plants and animals that are found exclusively in a particular area and do not occur naturally anywhere else are called \_\_\_\_\_species.

(ii) \_\_\_\_\_ are the large areas of protected land for conservation of wildlife, plant and animal resources and traditional life of tribals living in the area.

(iii) \_\_\_\_\_is the major cause leading to desertification,

(iv) Zoological park, botanical gardens and gene banks are \_\_\_\_\_methods of conservation of biodiversity

A. (i) Extinct, (ii) National park

B. (ii) Biosphere reserve, (iii) Deforestation

C. (i) Endemic, (iv) In situ

D. (iii) Afforestation, (iv) Ex situ

**Answer: B**



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**4.** Read the given list of few methods of irrigation.

(i) Moat (ii) Sprinkler system

(iii) Dekhli (iv) Chain pump

(v) Drip system (vi) Rahat

How many of these are traditional methods (p) and modern methods (q) of irrigation?

	<i>p</i>	<i>q</i>
A.	3	3
B.	4	2
C.	5	1
D.	2	4



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5. Which of the following is an extinct species?

A. Snow leopard

B. Sea mink

C. Water hyacinth

D. Lion-tailed macaque

**Answer: B**



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## 6. Refer to the given terms.

(i) RBC

(ii) WBC

(iii) Blood

(iv) Muscle

(v) Skin

(vi) Brain

(vii) Heart

(viii) Lung

(ix) Sperm

(x) Kidney

Select the option which correctly classifies the given terms into cell, tissue and organ.

	<b>Cell</b>	<b>Tissue</b>	<b>Organ</b>
A.	(i), (ii), (ix)	(iii), (iv)	(v), (vi), (vii), (viii), (x)
B.	(i), (ii), (iii), (x)	(iv), (v)	(vi), (vii), (viii), (ix)
C.	(i), (ii), (iv), (ix)	(iii), (v), (vi)	(vii), (viii), (x)
D.	(i), (ii), (ix)	(iii), (iv), (v)	(vi), (vii), (viii), (x)



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7. Consider the given statements about a type of fertilisation.

- Both male and female release gametes outside the body
- Zygote develops outside the parent's body

Identify the type of fertilisation and select the option that correctly identifies the animal in which this type of fertilisation occurs.



A.



B.



C.



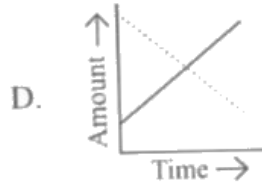
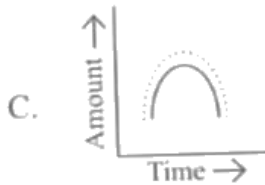
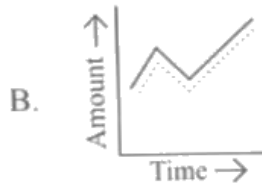
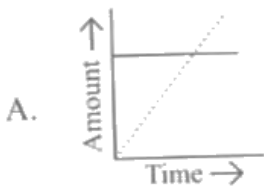
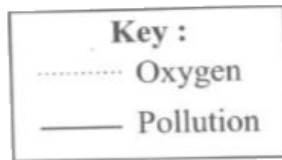
D.

**Answer: A**



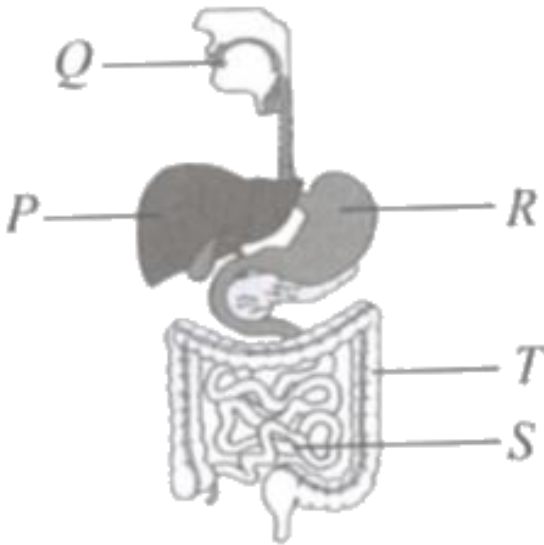
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8. Which of the following graphs correctly shows the likely relation between amount of water pollution and amount of dissolved oxygen in a river?



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9. Refer to the given figure and select the correct statement regarding its labelled parts.



A. *P* could be the organ that kills many bacteria that enter along with the food due to its acidic pH.

B. Digestion of food begins in and gets completed in T.

C. Juice secreted by R plays an important role in the digestion of fats.

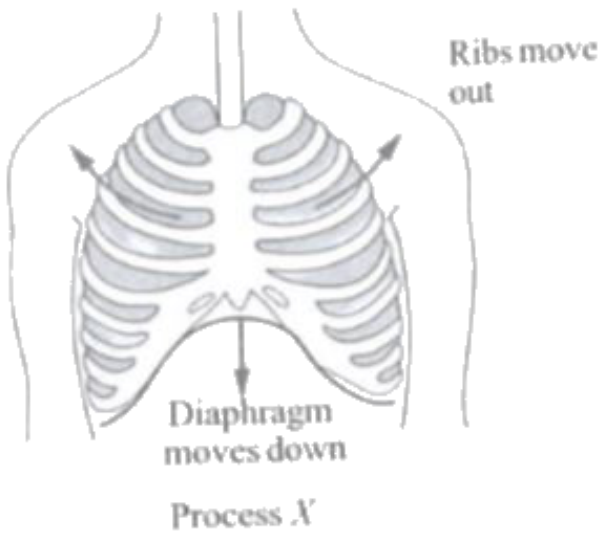
D. Digestion of food is completed in S.

**Answer: D**



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10. Identify the process X shown in the given figure and select the correct statement regarding it.



A. During process X, air rushes out from the lungs.

B. During process X, volume of thoracic cavity decreases.

C. During process X, air pressure in the lungs decreases.

D. During process X, the diaphragm muscles relax.

**Answer: C**



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**11.** Select the incorrect statement.

A. Photosynthesis takes place in the leaf of a plant.

B. Relation between fungi and roots of higher plants is parasitic in nature.

C. Rhizobium often lives in the roots of pea and bean plants.

D. Cuscuta is a total parasitic plant that has no leaves and roots.

**Answer: B**



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**12. Select the incorrect match.**

	<b>Breed of sheep</b>	<b>State where found</b>
A.	Nali	Haryana
B.	Patanwadi	Punjab
C.	Bakharwal	Jammu and Kashmir
D.	Lohi	Rajasthan



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13. Refer to the given table and select the correct option.

Name of disease	Causative microorganism	Mode of transmission
Tuberculosis	Bacteria	<i>W</i>
Polio	<i>X</i>	Contaminated air/water
<i>Y</i>	Bacteria	Contaminated food/water
Malaria	<i>Z</i>	Mosquito

- |    | <i>W</i>          | <i>X</i> | <i>Y</i>   | <i>Z</i> |
|----|-------------------|----------|------------|----------|
| A. | Air               | Protozoa | Diphtheria | Virus    |
| B. | Contaminated food | Virus    | Dengue     | Protozoa |
| C. | Contaminated food | Virus    | Cholera    | Virus    |
| D. | Air               | Virus    | Cholera    | Protozoa |



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**14.** Read the given paragraph where few words have been italicised and select the correct option regarding it.

Prokaryotes possess well-defined nucleus and membranebound cell organelles. They lack a cell wall. Eukaryotes dont have true nucleus. They may or may not have a cell wall. Plant cells generally have a large vacuole whereas animal cells have small vacuoles. Plastid is present both in plant and animal cells but mitochondria are present only in animal cells.

A. Positions of possess and lack should be interchanged whereas don't should not be replaced as it is correctly mentioned.

B. Cell wall should not be replaced with cell membrane and positions of large and small should not be interchanged as they are correctly mentioned.

C. Plastid should be replaced with nucleus whereas mitochondria should not be replaced as it is correctly mentioned.

D. Large should be interchanged with small  
and mitochondria should be replaced  
with ribosomes.

**Answer: B**



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