

N 953

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2026 III 13 1100 – **N 953** – SCIENCE AND TECHNOLOGY (72) – PART II (E)

(REVISED COURSE)

Time : 2 Hours

(Pages 7)

Max. Marks : 40

Note :— (i) **All questions are compulsory.**

(ii) **The numbers to the right of the questions indicate full marks.**

(iii) **In case of MCQs [Q. No. 1 (A)] only the first attempt will be evaluated and will be given credit.**

(iv) **Scientifically and technically correct, labelled diagrams should be drawn wherever necessary.**

(v) **Each new question should be started on the new page.**

1. (A) Choose the correct alternative : 5

(i) The causality behind the sudden changes was understood due to principle of Hugo de Vries.

(A) Appendix

(B) Mutation

(C) Transcription

(D) Translocation

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(ii) After complete oxidation of a glucose molecule, number of ATP molecules are formed.

(A) 18

(B) 28

(C) 38

(D) 48

(iii) Bat is included in class

(A) Amphibia

(B) Reptilia

(C) Aves

(D) Mammalia

(iv) In Maharashtra the major hydroelectric power plant is located at

(A) Chandrapur

(B) Koyana

(C) Parali

(D) Tarapur

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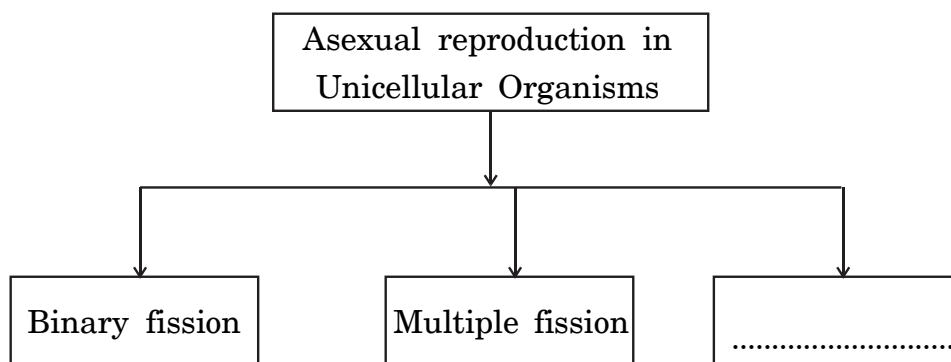
- (v) A first state to start a separate cyber crime unit in our country is

- (A) Madhya Pradesh
(B) Maharashtra
(C) Gujrat
(D) Karnataka

(B) Answer the following questions :

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- (i) Fill in the box with proper words :



- (ii) Which day is observed as World Biodiversity Day ?

- (iii) Identify me, who am I ?

I was the first clone sheep born in Scotland.

- (iv) Write the molecular formula of acetic acid.

- (v) State whether the following statement is true or false :

The chairman of National Disaster Management is Sarpanch.

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2. (A) Give scientific reasons (any *two*) : 4

- (i) The popularity of probiotic products is increasing.
- (ii) Body temperature of reptiles is not constant.
- (iii) Nowadays farmers are opting for organic farming.

(B) Answer the following questions (any *three*) : 6

- (i) What is meant by carbon dating ? Give any *one* use of this technique.
- (ii) Complete the table :

Sr. No.	Protein	Name of Organ
1		Bones
2	Insulin	

- (iii) Read the paragraph and answer the questions :

Paddy is cultivated on large scale in various states of South India. Paddy fields are frequently attacked by grasshoppers. Similarly, frogs are also present in large number in the mud of paddy fields, to feed upon grasshoppers and snakes are also present therein to feed upon their favourite food-frogs. However, if frog population declines all of a sudden,

- (a) What will be effect on paddy crop ?
- (b) Number of which components will increase ?

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- (iv) Write any *two* advantages of hydroelectric power generation.
- (v) The following are the pictures of some disasters. How will be your post disaster management in case you face any of those disasters ?



(A)



(B)

3. Answer the following questions (any *five*) :

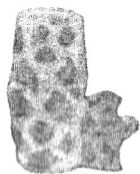
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- (i) Explain theory of Lamarckism with the help of any *two* suitable examples.
- (ii) Name the type of cells in which mitosis occur ? Write *four* stages of karyokinesis.
- (iii) Give *two* examples of each of the threatened species given below :
- (a) Endangered species
 - (b) Rare species
 - (c) Vulnerable species.
- (iv) Which fuel is used in thermal power plant ? What are the problems associated with this type of power generation ?

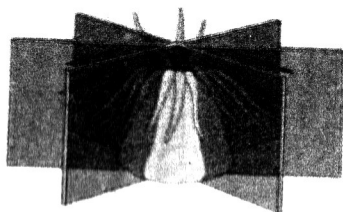
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- (v) Identify the type of body symmetry of the animals shown in the given pictures :



(A)

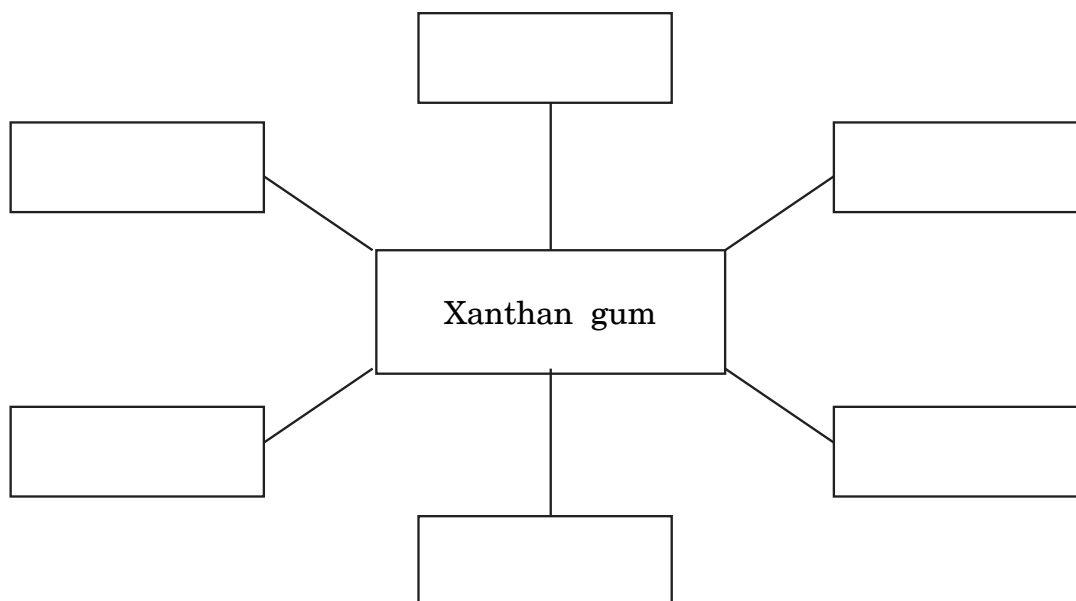


(B)



(C)

- (vi) Complete the following conceptual picture with respect to uses :



- (vii) Which precautions will you take during spraying of pesticides ?
- (viii) Write the names of any *six* materials in first aid box.

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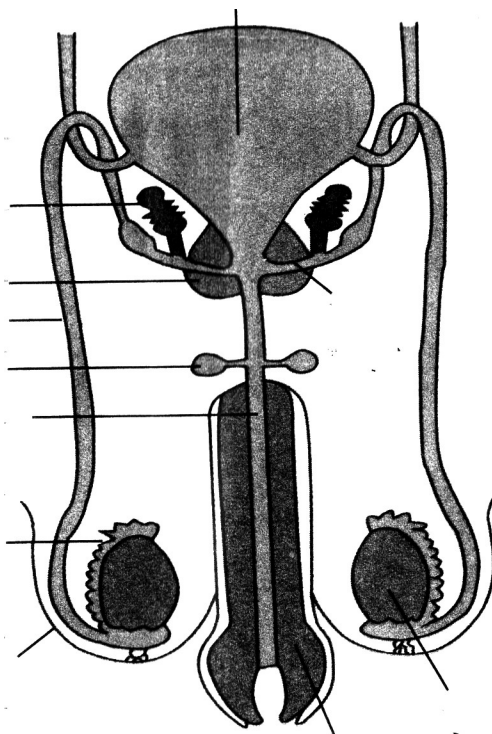
4. Answer the following questions (any one) :

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- (i) (a) Write the names of any *six* factors affecting social health.
- (b) What will you do ? Why ?

Your brother studying in XII has developed the stress.

- (ii) Observe the diagram given below and answer the questions :



- (1) Write the name of the reproductive system in the above diagram. 1
- (2) Name any *two* glands in the above diagram. $\frac{1}{2} + \frac{1}{2} = 1$
- (3) Mention any *one* duct in the above system. 1
- (4) What is the length of a sperm ? 1
- (5) Which hormone is secreted by the testes ? 1