

# Newton's Academy

## Science Part 2

**Time: 2 Hours**

**Total Marks: 40**

- Note:**
- i. All questions are compulsory.
  - ii. Use of a calculator is not allowed.
  - iii. The numbers to the right of the questions indicate full marks.
  - iv. In case of MCQs [Q. No. 1(A)], only the first attempt will be evaluated and will be given credit.
  - v. For each MCQ, the correct alternative (A), (B), (C) or (D) with subquestion number is to be written as an answer.  
**For E.g.:** (i) (A), (ii) (B), (iii) (C).
  - vi. Scientifically correct, labelled diagrams should be drawn whenever necessary.

**Q.1. (A) Choose the correct option and write its number for the following questions: [5]**

- i. Glycolysis and \_\_\_\_\_ are two steps of anaerobic respiration.
 

(a) Kreb's cycle	(b) Electron transfer chain reaction
(c) Fermentation	(d) Reduction
- ii. \_\_\_\_\_ is used in thermal power plant.
 

(a) Coal	(b) Uranium	(c) Natural gas	(d) Water
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- iii. Chemically, vinegar is 4% \_\_\_\_\_.
 

(a) Gluconic acid	(b) Amino acid
(c) Citric acid	(d) Acetic acid
- iv. Government of India has encouraged the \_\_\_\_\_ for improving the production by launching NKM-16.
 

(a) Apiculture	(b) Vermiculture
(c) Pisciculture	(d) Sericulture
- v. Alcohol consumption mainly affects \_\_\_\_\_ system.
 

(a) Respiratory	(b) Nervous
(c) Digestive	(d) Circulatory

**(B) Answer the following questions: [5]**

- i. Write the scientific name of human being.
- ii. Find the odd man out:  
Actin, Ossein, Myosin, Aldosterone
- iii. State whether True or False:  
The power available from the solar cell is AC.
- iv. I have calcareous spines and I move with tube feet, which phylum do I belong to?
- v. Write any one example of natural disasters.

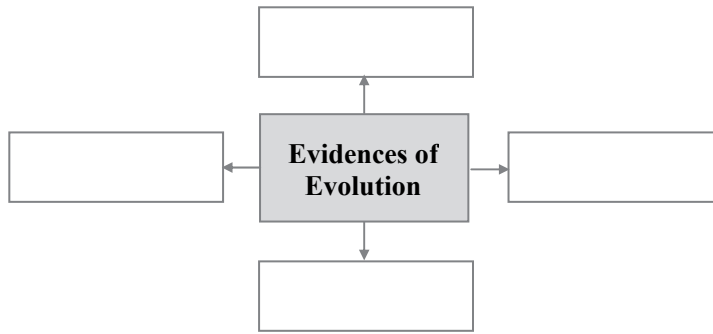
**Q. 2. (A) Give scientific reasons: (any two) [4]**

- i. Water is an essential nutrient.
- ii. Tobacco chewing is injurious to health.
- iii. It is absolutely necessary to control the fission reaction in nuclear power plants.

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

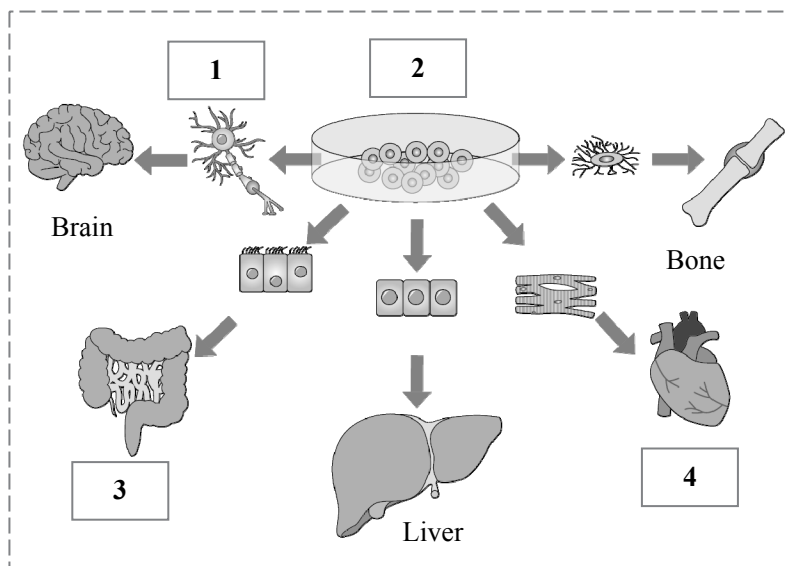
[6]

i. Complete the following chart:



ii. What is environment ? Write two types of environment.

iii. Observe the given diagram and write proper names in the blocks.



iv. Which precautions should be followed to maintain the reproductive health?

v. Distinguish between butterfly and bat with the help of two distinguishing characteristics.

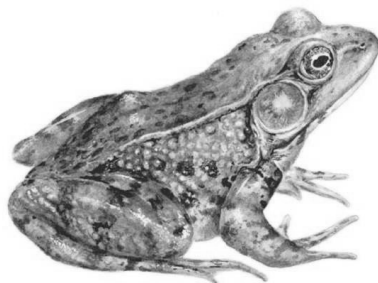
**Q. 3. Answer the following questions: (any five)**

[15]

i. Redraw the table taking into account the relation between entries in the three columns.

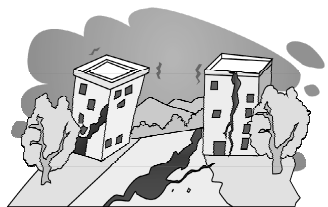
Column I	Column II	Column III
Coal	Kinetic energy	Nuclear power plant
Uranium	Thermal energy	Wind electricity plant
Wind	Nuclear energy	Thermal plant

ii.



- (a) Identify the class of the animals shown in the figure.
- (b) Write two characteristics of that class.

- iii. Which precautions are necessary for proper decomposition of domestic waste?
- iv. Write the importance of medicinal plants.
- v. What will you do? Why?
  - (a) You are spending more time on Internet/mobile games, phone, etc.
  - (b) You have to use free space around your house for good purpose.
  - (c) Your brother studying in Std. XII has developed stress.
- vi. The following are some picture of disasters. Which precautions would you take during these disasters?



(a)



(b)



(c)

- vii. Explain the concept of connecting links with two examples.
- viii.
  - (1) Write two sources of lipids.
  - (2) How much energy is obtained from lipids?
  - (3) What is produced after digestion of lipids?

**Q. 4. Answer the following questions: (any one)**

[5]

- i. Draw a neat and labelled diagram of female reproductive system and give the functions of:
  - (a) Oviduct (b) Ovary (c) Uterus
- ii. Explain the meanings of the following symbols:

