

**AIR FORCE SCHOOL PANCHWATI**  
**MID TERM EXAM (2024 - 25)**  
**CLASS VII**  
**SCIENCE**

Time-2 hours 30 minutes

M.M: 60

**General Instructions:**

1. This question paper consists of 30 questions. All questions are compulsory.
2. Question paper is divided into FIVE sections- Section A, B, C, D and E.
3. Section A consists of 16 objective type questions carrying 1 mark each.
4. Section B consists of 6 Very Short questions carrying 02 marks each. Answers to these questions should be in the range of 30 to 50 words.
5. Section C consists of 3 Short Answer type questions carrying 03 marks each. Answers to these questions should be in the range of 50 to 80 words.
6. Section D consists of 3 Long Answer type questions carrying 05 marks each. Answer to these questions should be in the range of 80 to 120 words.
7. Section E consists of 2 source-based/case-based units of assessment of 04 marks each with sub-parts.

**SECTION A**

Select and write one most appropriate option out of the four options given for each of the questions 1-16. [1x16=16]

1. What are the organisms called that synthesize their food from inorganic materials?  
(a) Autotrophs (b) Heterotrophs  
(c) Saprotrophs (d) Parasites
2. What is the purpose of rumination in certain animals?  
(a) To digest meat more efficiently (b) To break down cellulose  
(c) To increase food intake (d) To cool down the body
3. What phenomenon explains why hot water rises?  
(a) Conduction (b) Convection (c) Radiation (d) Expansion
4. What is the effect of adding acidic solution to China rose indicator?  
(a) Turns yellow (b) Turns magenta (c) Turns blue (d) Turns green
5. Cockroaches breathe by using an organ called  
(a) Nose (b) Tracheae  
(c) Both (a) and (b) (d) None of these
6. Rusting occurs when iron is exposed to  
(a) Oxygen and water (b) Soil and rain  
(c) Breeze and sunlight (d) Salt water and clouds
7. What is transpiration?  
(a) Absorption of water by roots (b) Loss of water from leaves  
(c) Synthesis of food in leaves (d) Growth of roots in soil
8. What should be given to a person suffering from diarrhoea?  
(a) Cold drinks (b) Oral Rehydration Solution (ORS)  
(c) Hot tea (d) Milk

9. Why are stainless steel pans often provided with copper bottoms?  
(a) To improve heat conduction (b) To make them look more attractive  
(c) To make them easier to clean (d) To increase their weight
10. Which acid is involved in an ant bite?  
(a) Lactic acid (b) Hydrochloric acid (c) Formic acid (d) Citric acid
11. The part of human body which lacks sweat gland is  
(a) Scalp (b) Armpits (c) Lips (d) Palms
12. Name the type of respiration which causes muscle cramps.  
(a) Aerobic respiration (b) Anaerobic respiration  
(c) Both (a) and (b) (d) None of these
13. Name an instrumental device used to amplify the sound of heart.  
(a) Stethoscope (b) UV machine (c) Both (a) and (b) (d) Ultrasound machine

**Directions:** In each of the following questions, a statement of Assertion is given and a corresponding statement of Reason is given just below it. Of the statements, given below mark the correct answer as:

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.  
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.  
(c) Assertion is true but reason is false.  
(d) Assertion is false but reason is true.

14. **Assertion (A)** : When muscle cells, in humans respire anaerobically cramps occur.

**Reason (R)** : Accumulation of lactic acid causes cramps.

15. **Assertion (A)**: Heart is a tissue which acts as a pump.

**Reason (R)**: Heart is roughly the size of a human fist.

16. **Assertion (A)** : Burning of paper is a physical change.

**Reason (R)** : The products formed on burning of paper cannot be converted back to paper

### SECTION B

Q.17 to 22 are very short answer questions.

[2x6=12]

17. Choose the odd one out from each group and give reasons

- (a) Liver, salivary gland, starch, gallbladder  
(b) Oesophagus, small intestine, large intestine, rectum

OR

17. Describe the nutrition process in Amoeba.

18. Why does water heat more quickly when heated from the bottom rather than the top?

19. A small amount of hydrochloric acid is always produced in the stomach. Is it useful or harmful for us? If excess of acid is produced in the stomach, what should we do?

20. Why do we get muscle cramps after heavy exercise? Classify the process into Aerobic or Anaerobic respiration and state reason why?

21. Plants prepare their food by a process called photosynthesis. Can we call photosynthesis is a chemical change? Explain.

22. Why is blood needed by all the parts of a body?

OR

22. Differentiate between Artery and Vein.

**SECTION C**

Q23 to 25 are short answer questions.

[3x3=9]

23. What are the different types of heterotrophic nutrition in plants? Give two examples of each?

24. Give an example of a chemical reaction for each of the following situations.

- (a) A change in colour is observed.
- (b) A gas is evolved.
- (c) Sound is produced.

OR

24. Describe two changes that are harmful. Explain why you consider them harmful? How can you prevent them?

25. Draw a diagram of the human excretory system and label the various parts

OR

25. What are stomata? Give two functions of stomata.

**SECTION-D**

Q26 to 28 are long answer questions.

[3x5=15]

26. Explain the Digestion and absorption process in humans?

OR

26. Draw a diagram of human digestive system and label the following parts.

- (a) Muscular bag
- (b) Anus
- (c) Large Intestine
- (d) Oesophagus

27. (a) Smoking is considered harmful due to certain effects. Explain in brief.

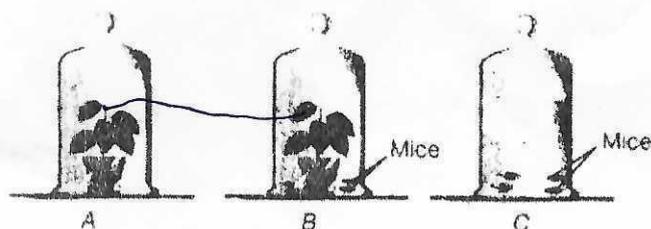
(b) Breathing rate of a person is not always constant. Give the reason for your answer

OR

27. (a) There are three animals named A, B and C. Among them A can stay on land as well as in water. When it stays at land it respire through lungs but when it goes into water, it respire through its moist skin. Animal B has specific organs to respire in the water which is not found in any other water animal. While animal C is a water animal which respire through nostrils and lungs. Now give the name of animal A, B and C.

(b) Observe the given figures carefully, and answer the following questions.

- (i) The amount of CO<sub>2</sub> be the highest in which jar. Why?
- (ii) The amount of CO<sub>2</sub> be the lowest in which one and why?



28. (a) Give one function of each of the following organs,

- (i) Blood vessels
- (ii) Kidney
- (iii) Blood platelets
- (iv) Heart

(b) Skin is also considered as an excretory organ. Give reason if you agree.

OR

28. Arrange the following statements in the correct order in which they occur during the formation and removal of urine in human beings.

- (i) Ureters carry urine to the urinary bladder.
- (ii) Wastes dissolved in water is filtered out as urine in the kidneys.
- (iii) Urine stored in urinary bladder is passed out through the urinary opening at the end of the urethra.
- (iv) Blood containing useful and harmful substances reaches the kidneys for filtration.
- (v) Useful substances are absorbed back into the blood.

**SECTION-E**

**Q29-30 is case - based/data -based questions with 4 short sub - parts.**

**[4x2=8]**

29. Some things feel hot when touched while others feel cold. So, our sense of touch tells us whether a thing is hot or cold. But does it always give us accurate results? A reliable measure of the hotness of an object is its temperature. Temperature is measured by a device called a thermometer. The thermometer used to measure human body temperature is known as clinical thermometer. A clinical thermometer is made up of a long and narrow glass tube. It has a special feature called a kink just above the mercury bulb. This kink prevents immediate backflow of the mercury from the tube to the bulb, thus allowing us to read the temperature conveniently. The normal body temperature of a healthy person is 37°C or 98.6°F.
- (a) Define temperature?
  - (b) Write one similarity between clinical thermometer and laboratory thermometer
  - (c) What is the normal temperature of the human body?
  - (d) What is the use of kink in a clinical thermometer?
30. The reaction between an acid and a base is known as neutralisation reaction. In this reaction salt and water are produced with evolution of heat.
- (a) Name the salt formed by reaction of sodium hydroxide and hydrochloric acid.
  - (b) What is a neutralisation reaction?
  - (c) Give two examples in our daily life where neutralization reaction occurs.