

INTERNATIONAL INDIAN SCHOOL, DAMMAM

FIRST TERMINAL EXAMINATION 2017-2018

SUBJECT: SCIENCE

MAX MARKS: 80

CLASS X

TIME: 3.00HRS

SET A

General instructions

- i. The paper comprises two sections, A and B. You are to attempt both sections.
- ii. All questions of section A and section B are to be answered separately.
- iii. Questions 1-2 in section A are one mark questions and to be answered in one word or in one sentence.
- iv. Questions 3-5 are two mark questions and to be answered in about 30 words each.
- v. Questions 6 -15 in section A are three mark questions and to be answered in about 50 words each.
- vi. Questions 16- 21 are in section A are 5 mark questions and to be answered in about 70 words each.
- vii. Questions 22- 27 in section B are 2 mark questions based on practical skills. and are to be answered briefly.

SECTION A

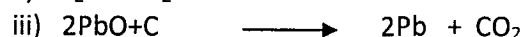
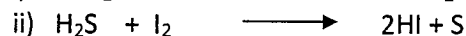
1. Draw the symbols of the following electrical components:- 1
a) A battery b) Plug key (closed)
2. Name the smallest blood vessel in the human circulatory system and mention its function. 1
3. A piece of wire of resistance 20Ω is drawn out so that its length is increased to twice its original length. Calculate the resistance of the wire in the new situation. 2
4. a) What is meant by the term magnetic field? 2
b) Why don't two magnetic lines of force intersect each other?

5. When we mix the solutions of lead (II) nitrate and potassium iodide 2
a) What is the colour of the precipitate formed?
b) Name the precipitate.
c) Write the balanced chemical equation for this reaction.

6. a) Draw the magnetic field pattern produced by a current carrying circular 3
wire.
b) What are the factors on which the strength of the magnetic field at the
centre of the circular wire depend.

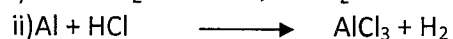
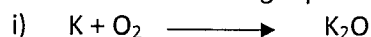
7. An electric heater draws a current of 10 A from a 220 V supply. What is the 3
cost of using the heater for 5 hours every day for 30 days if the cost of 1 unit is
Rs.5.20?

8. Identify the substance oxidised and the substance reduced in the following 3
reactions.



OR

Balance the following equations:-



9. Atul and Deepak are best friends and study in the same school. One day, 3
during the break time, they had taken their lunch together. After the lunch,
Deepak felt uncomfortable and had a stomachache. Atul, on observation
found that Deepak had eaten spicy junk food in his lunch instead of eating
nutritious food. He took Deepak to the first aid where the nurse gave him a
spoon of antacid syrup. Now, Deepak felt better and gave thanks to Atul.

i) What problem was Deepak suffering from?

ii) What happened when Deepak took antacids? Name the type of reaction.

iii) What values were shown by Atul and Deepak?

10. A reddish brown coloured metal, used in electrical wires, when powdered and 3
heated strongly in an open china dish turns black. When hydrogen gas is
passed over this black substance, it regains its original colour. Based on the
above information, answer the following questions:-

i) Name the metal and the black coloured substance formed.

ii) Write balanced chemical equations for both the reactions.

11. A piece of thread was tied tightly around an animal's pancreatic duct. The animal subsequently had difficulty in digesting food. Why did it happen? Which digestive functions are disrupted? 3
12. Differentiate between plasma and lymph with its functions. 3
13. Which tissues help in the transport of water, minerals and food? Name and explain the mechanism by which water, minerals and food are transported in plants. 3
14. Show the different ways in which glucose is broken down to provide energy in various organisms? 3
15. Draw a neat diagram of the human excretory unit. Name and label the following parts. 3
- i) The part that functions as the filtering unit.
 - ii) The part through which the pure blood is sent from the kidney.
 - iii) The part that collects the waste materials from the blood.
 - iv) The part which reabsorbs glucose, amino acids etc. from the tubule.

OR

Draw a neat diagram of the human respiratory system. Name and label the following parts.

- a) Upper end of the trachea
 - b) Gaseous exchange takes place through this.
 - c) Partition separating thoracic and abdominal cavity.
 - d) The wind pipe made of cartilaginous rings .
16. a) With the help of a diagram describe an activity to demonstrate the pattern of magnetic field lines around a straight conductor carrying current. 5
- b) State the rule to find the direction of magnetic field associated with a straight current carrying conductor.
- c) A current through a horizontal power line flows in east to west direction. What is the direction of magnetic field at a point directly below it and at a point directly above it?

(OR)

- a) With a help of a diagram, describe an activity to show that a magnetic field exerts a force on a current carrying conductor.
- b) State the rule to determine the direction of the force experienced by a current carrying conductor placed in a magnetic field.
- c) A positively -charged particle (alpha -particle) projected towards west is deflected towards north by a magnetic field. What is the direction of magnetic field?

17. a) Write three advantages of connecting electrical devices in parallel with the mains in a household circuit. 5
 b) How can three resistors of 2Ω , 3Ω and 6Ω be connected to give a total resistance of i) 4Ω ii) 1Ω .
18. a) Why is hydrochloric acid, a strong acid and acetic acid, a weak acid? 5
 b) Explain why aqueous solution of an acid conducts electricity?
 c) You have four solutions A, B, C and D. The pH of solution A is 6, B is 9, C is 12 and D is 7.
 i) Identify the most acidic and most basic solutions.
 ii) Arrange the above four solutions in the increasing order of H^+ ion concentration.
 iii) State the change in the colour of pH paper on dipping in solution C and D.
19. i) Classify the following salts into acidic, basic and neutral: 5
 Potassium sulphate, ammonium chloride, sodium carbonate, sodium chloride
 ii) Write the chemical name and chemical formula of Plaster of Paris. With the help of a chemical equation show the reaction between Plaster of Paris and water. Also write two uses of Plaster of Paris.
20. There is a pair of bean shaped organ A in the human body towards the back just above the waist. The waste produced B formed by the decomposition of unused proteins in the liver is brought into the organ A through blood by an artery C. The numerous tiny filters D present in the organ A clean the dirty blood by removing the waste B. The clean blood goes into circulation through a vein E. The waste substance B, other waste salts, excess water, form a yellowish liquid F which goes from organ A into a bag like structure G through two tubes H. This liquid is thrown out of the body through I. 5
 a) Name The organ A, Name the waste material B
 b) Name the artery C, Name the vein E
 c) Name the filter D, Name the yellowish liquid F
 d) Name the bag like structure G, Name the tubes H
 e) Name the organ I, Which human system are they referring to?
21. a) Explain the different pathways of blood in human heart and mention the reason why circulation of blood in humans is referred as double circulation? Give a neat schematic representation of the above, with correct labeling. (3marks) 5
 b) Which part of the body secretes bile? Where is it stored? Mention the two functions of bile. (2marks)

SECTION B

22. i) How do you connect an ammeter and a voltmeter in an electric circuit? 2
ii) Draw a schematic diagram of a circuit consisting of a cell of 1.5V, 10 Ω and 15 Ω resistors and a plug key all connected in series.
23. A milliammeter has graduations marked 0,100,200,300,400 and 500. The 2
space between 0 mark and 100 marks is subdivided into 20 divisions. In an experimental set-up the pointer of milliammeter is indicating the seventh graduation after 300 marks. What is the current flowing in the circuit?
24. Name the type of reaction when an iron rod is kept in a solution of copper 2
sulphate. What will happen to iron rod and copper sulphate solutions?
25. A substance X was added to dilute hydrochloric acid to liberate a gas which 2
burns with a pop sound. Identify X and the gas evolved. Write the chemical equation for the reaction involved.
26. A part of the destarched leaf of a potted plant was covered with black paper 2
strips on both sides and the plant was kept in sunlight for 8 hours. The leaf was then tested with iodine after boiling it in alcohol. Only the uncovered part of the leaf turned blue black.
a) What is the inference?
b) Why did they boil the leaf in alcohol but not in any other solution?
27. In one of the light experiments, KOH is kept in a glass bottle containing a 2
potted plant with its destarched leaf half inside the glass bottle while the other half is exposed.
a) Why did we keep pellets of KOH in the glass bottle?
b) What does this experiment prove?