NEW AL WUROOD INTERNATIONAL SCHOOL, JEDDAH

Affiliated to CBSE – New Delhi, No:5730008

Pre-midterm Examination (2017 -2018)

Subject:SCIENCE

Date: 13-06-2017 **Set: A** **Time: 3 Hours**

Class:X **Max. Marks: 80**

Instructions to the Candidates:

- ***The question paper comprises of two sections, A and B. You are to attempt both the sections.***
- ***All questions are compulsory.***
- ***There is no overall choice. However an internal choice has been provided in two questions of 3 marks and one question of 5 marks weightage. A student has to attempt only one of the alternatives in such questions.***
- ***All questions of Section -A and all questions of Section B are to be attempted separately.***
- ***Question numbers 1 to 2 in Section -A are one mark questions. These are to be answered in one word or in one sentence.***
- ***Question numbers 3 to 5 in section -A are two mark questions. These are two be answered in about 30 words each.***
- ***Question numbers 6 to 15 in Section -A are three marks questions. These are to be answered in about 50 words each.***
- ***Question numbers 16 to 21 in Section-A are five marks questions. These are to be answered in about 70 words each.***
- ***Question numbers 22 to 27 in Section –B are questions based on practical skills. Each question is of two marks.***

SECTION-A

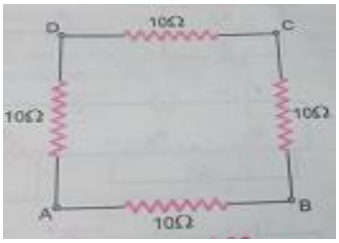
1. Name one enzyme in humans which digests fats. (1)
2. How is brain protected? (1)
3. How would you distinguish between Baking powder and washing soda on heating? (2)
4. How many 176Ω resistors in parallel are required to carry 5A on a 220V line? (2)
5. State the function of (i) gustatory receptors and (ii) olfactory receptors (2)
6. In a solar cooker, the following arrangements are made.Write one function of each arrangement. (3)
   i. The inner walls of the box are painted black.
   ii. The box is covered with a transparent glass sheet.
   iii. A plane mirror is hinged at an angle at the top of the box.

   Or

   Hydrogen is used as a rocket fuel.
   i. Would do you consider it cleaner fuel than CNG. Why or Why not?
   ii. What steps you would suggest to reduce energy consumption?

7. On adding a drop of barium chloride solution to an aqueous solution of sodium sulphate a precipitate is obtained. (3)
   i. Write a balanced chemical equation of the reaction involved.
   ii. What is the other name for the precipitation reaction?
   iii. What is the colour of the precipitate formed? Give another example for this kind of reaction.
8. You have four solutions A,B,C and D.The pH of A is 6,B is 9 ,C is 12 and D is 7. (3)
   i. Identify the most acidic and most basic solutions.
   ii. Arrange the above four solutions in the increasing order of hydrogen ion concentrations.
   iii. State the change in colour of pH paper on dipping in solution C and D.

9. Four resistances, each of 10 Ω, are connected to form a square as shown in figure. Find the equivalent resistance between the opposite corners A and C is: (3)



10. In an IT firm, there are sixty professionals, most of them come by their personal vehicle. Most of them come from the same locality. (3)

    (a)Will this practice of commuting help the nature? Justify it.

    (b) If not, what can they do to help the nature?

    (c) What associated values will the learner get from the idea developed to help the nature?

11. An alkali is an important base used for the laboratory work. Name the base and state how it can be used from the common salt? What is this process called? (3)

12. (a) ‘’The breathing cycle is rhythmic whereas exchange of gases is a continuous process”. Justify this statement.

    (b)What is translocation in plants? (3)

Or

Explain any three methods used by plants to get rid of excretory products.

13. Leaves of a healthy potted plant were coated with vaseline to block the stomata. Will this plant remain healthy for long? State three reasons for your answer. (3)

14. With the help of a schematic diagram explain reflex arc and reflex action. (3)

15. What are nephrons? How is nephron involved in the filtration of blood and formation of urine? (3)

16.

    i. What determines the rate at which the energy is delivered by a current?

    ii. Two electric bulbs A and B marked as 220V, 60 W and 220V ,40W respectively. Which one of the two bulb has greater resistance?

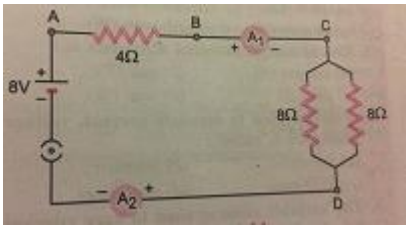
    iii. An electric heater is rated at 2kW.Calculate the cost of using it for 2 hours daily for the month of September, if each unit costs Rs.4.00. (5)

17.

i. Define Ohm's law.

ii. Why are coils of electric toaster and electric iron is made of an alloy rather than a pure metal?

iii. Find out the following in the electric circuit given in the figure.



(a) Effective resistance of two 8Ω resistors in the combination

(b) Current flowing through 4 Ω resistors

(c) Difference in ammeter readings, if any (5)

18. In the following chemical reaction "Zinc oxide reacts with carbon to produce Zinc metal and carbon monoxide".

i. Identify the substance oxidized,Substance reduced,Oxidising agent and reducing agent.

ii. State the reason for choosing the substance oxidized and substance reduced.

iii. Name the type of reaction and an example for a similar reaction. (5)

19. (a) Draw a diagram of human respiratory system and label the following: (i) part where air is filtered by fine hair and mucus (ii) part which terminates in balloon – like structures (iii) balloon –like structures where exchange of gases takes place. (iv)part which separates chest cavity from abdominal cavity.

(b) Why is the rate of breathing in aquatic organisms much faster than in terrestrial organisms? (5)

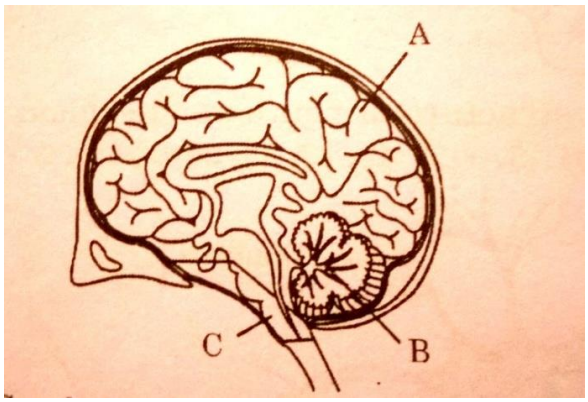
Or

(a) Draw a sectional view of the human heart and label on it – Aorta, Right ventricle and Pulmonary vien

(b)State the functions of the following components of transport system.

(i) Blood (ii)Lymph

20. (a) Observe the diagram of the human brain and label the parts A,B,C. Write any one function of each part.



(b) What are voluntary and involuntary actions? (5)

21.

i. What is water of crystallization ?Give two examples

ii. Arrange the following salts into acidic,basic and neutral salts.
Sodium chloride,Copper sulphate,Ammonium chloride,Sodium carbonate.

iii. What is the pH of neutral water and what would be the colour of pH paper in tap water? (5)

SECTION - B

22. In an electric circuit containing resistance, ammeter, key and battery, where will you connect voltmeter to verify ohm's law? (2)

23. What is the nature of graph obtained for V and I (Ohms law) and what does it indicate? (2)

24. Carbon dioxide gas should be passed through lime water only for a short duration. Explain why? (2)

25. What do you observe when ferrous sulphate crystals are heated? Name the products and give the equation. (2)

26. What is the importance of stomata for a leaf? (2)

27. How do guard cells help in opening and closing of stomata? (2)