ANNUAL EXAMINATION

Question Paper 2023

NCERT BASED SYLLABUS

FOR CBSE AND STATE BOARD
FOLLOWING NCERT

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ANNUAL EXAMINATION (2022-23)

Class - VIII | **Subject – Science**
Time – 3 Hours | **Maximum Marks - 80**

Attempt all questions. However there are internal choices. Rough work to be done in the right margin.

PHYSICS

Choose the most appropriate answer. **[2 x 1= 2]**

1. A boy rolls a rubber ball on a wooden surface. The ball travels a short distance before coming to rest. To make the same, ball travel longer distance before coming to rest, he may
   (a) spread a carpet on the wooden surface
   (b) cover the ball with a piece of cloth
   (c) sprinkle talcum powder on the wooden surface
   (d) sprinkle sand on the wooden surface **[1]**

2. Which of the following can be charged by rubbing/friction?
   (a) plastic
   (b) amber
   (c) ebonite
   (d) All of these **[1]**

Very short answer questions. **[2x 1 = 2]**

3. What kind of lens is there in our eyes? Where does it form the image of an object? **[1]**

4. The planet Venus is hotter than mercury, though it is farther away from Sun. Why? **[1]**

Short answer type questions **[3 x 2 = 6]**

5. What are fault zones? Name the fault zones in India. **[2]**

6. What are the two factors affecting the force of friction? Name any two types of friction. **[2]**

7. Which properties of chromium make it useful for electroplating on iron? Why cannot we make the whole article with chromium? **[2]**

Long answer questions **[4x 3 = 12]**

8. (a) Give the differences between galaxy and constellation.
   (b) Draw the sketch to show the relative positions of prominent stars inUrsa Major constellation **[3]**

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9. (a)We cannot hear the sound of the exploding meteors in the sky, though we can see them. Why?
   (b) A pendulum oscillates 25 times in 5 seconds. Find its time period and frequency. **[3]**

10. (a) Why is it comfortable to lift a school bag with broad straps than thin straps?
    (b) Why atmospheric pressure is maximum at sea level? **[3]**

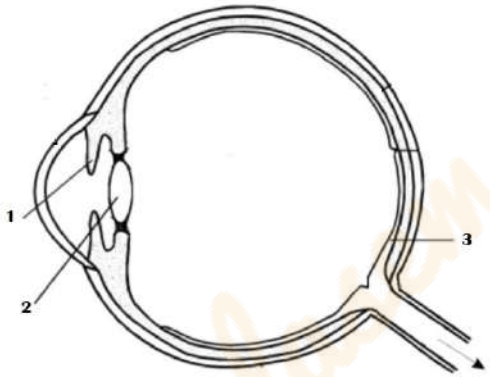
11. (a) State the laws of reflection
    (b) Calculate the number of images formed between two plane mirrors inclined at an angle of 90 degrees. **[3]**

Very long answer questions. **[1x 5 = 5]**

12. (a) Describe with the help of a diagram, how an electroscope is used to find the presence of charge on an object.
    (b) Define the terms (1) focus (2) epicentre of an earthquake.

OR

(a) Sketch the formation of image for a point object by a plane mirror.
(b) Label and write the function of the parts of the eye shown in the diagram below



CHEMISTRY

SECTION A (5×1=5)

1. Which among the following is the most reactive metal?
   (a) Calcium (b) Copper (c) Iron (d) Magnesium

2. Polycot is obtained by mixing
   (a) Nylon and wool (b) Polyester and wool (c) Nylon and cotton (d) Polyester and cotton

3. Name the gas produced when coal burns in
   (a) Sufficient oxygen
   (b) Insufficient oxygen

4. Name the two chemicals present in the head of a safety match.

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5. In an experiment 4.5 kg of a fuel was completely burnt. The heat produced was measured to be 180,000 KJ. Calculate the calorific value of the fuel.

SECTION B (4×2=8)

6. (a) Mention two differences between thermoplastics and thermosetting plastic.
   (b) Rohit took with him some nylon ropes, when he was going for rock climbing. Can you give two reasons why he selected nylon ropes instead of ropes made of cotton or jute?

7. (a) Naresh has a Maruti van for picking students which runs on petrol. His daughter asked him to get a CNG kit fitted in it. Do you agree with his daughter's suggestion? Why?
   (b) Define exhaustible resources .

8. Manu was heating oil to fry potato chips. The cooking oil all of a sudden caught fire. He poured water to extinguish the fire. Do you think this action was suitable? Explain your answer.

9. (a) Which air pollutant combines with the haemoglobin of your blood and name the compound formed.
   (b) At any individual level how can you help reduce air pollution? Explain any two points

SECTION C (3×3=9)

10. (a) Paheli bought a statue made of copper. To her surprise it acquired a dull green coating after a couple of months. Write the chemical equation for the above reaction.
    (b) Dinesh is the president of the society. During rainy season, he adds tablets in the water tank of the society so that the residents do not fall ill due to waterborne diseases . Name the non metal which is used in the form of tablets to disinfect water.
    (c) Name one soft metal which can be cut with a knife.

11. (a) With the help of an activity show that the innermost zone of the candle flame contains unburnt wax vapours.
    (b) Explain two reasons which make LPG a better fuel than wood.
    (c) State the difference between the outermost zone and middle zone of a candle flame on the basis of the following
    i) Colour ii) Combustion

12. (a) Mention two human activities which lead to an increase in the amount of carbon dioxide in the air.
    (b) Name the chemical which damages the Ozone layer when released in air.

SECTION D (1×5=5)

13. (a) Why does the increased level of nutrients in the water affect the survival of aquatic organisms?
    (b) Clear and transparent water is not always fit for drinking. Do you agree with the statement? Explain your answer.
    (c) Name two diseases caused by drinking contaminated water.

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OR

14. (a) Describe the threat to Taj Mahal due to air pollution.
(b) What are the steps taken by Supreme Court to save Taj Mahal?
(c) What is smog?

BIOLOGY

I. Choose the correct option: **[1X2=2]**

1. Read the following statements carefully and choose the correct option.

Statement I – The babies born through IVF technique are called test tube babies.
Statement II- In IVF technique, fertilization occurs inside the body.

(a) Both the statements I and II are true and statement II is the correct explanation of statement I.
(b) Both the statements I and II are true but statement II is not the correct explanation of statement I.
(c) Statement I is true but statement II is false.
(d) Both the statements I and II are false.

2. Read the statements given below.

(i) Seeds require moisture for germination .
(ii) Plants can absorb nutrients mostly in dissolved form.
(iii) Irrigation protects crops from pests and rodents.

Choose the combination of statements which indicate the need to irrigate crops.

(a) i and ii
(b) i, ii, iii
(c) i only
(d) i and iii

II. Answer the following questions in one sentence: **[1x2=2]**

3. What is Red Data Book?

4. (a) Name the bacterium that converts milk into curd.
(b) Why is yeast used in the wine industry?

III. Answer the following questions briefly:

5. The sample of urine of a person is diagnosed to contain a high content of glucose. The doctor has advised to take insulin injections. **[1+1=2]**
(a) Identify the disease the person is suffering from and the gland which secretes the hormone 'insulin'.
(b) What is the role of adrenaline hormone that is secreted and released in the blood?

6. (a) Why are protected forests also not completely safe for wild animals? (Write one point) **[1+1=2]**
(b) Write one difference between a zoo and a wildlife sanctuary.

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7. (a) Sowing the seeds at proper depth is an important aspect to be considered. Comment upon the statement. (Give one point) **[1+1=2]**
(b) How can nitrogen be replenished in soil naturally? Explain briefly.

8. (a) Explain briefly the consequence of deforestation on climate. (Write one point) **[1+1=2]**
(b) Why are endemic species at a greater risk of extinction than other species?

IV. Answer the following questions as directed:

9. (a) What changes are observed in the uterus if fertilization does not occur? (Write one point) **[1+1+1=3]**
(b) Differentiate between menarche and menopause.
(c) Tadpoles growing in iodine deficient waters fail to achieve their transformation into frogs. Give a scientific reason.

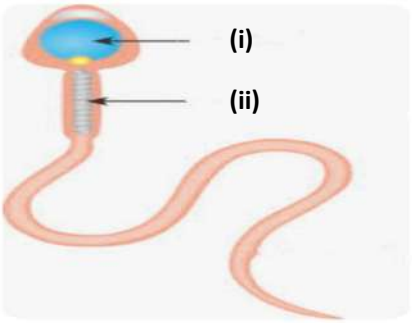
10. (a)'Gene is a unit of inheritance in living organisms.' Justify the statement giving a reason.
(b) A cell requires water, minerals and other nutrients to survive. But the cell is covered by a cell membrane. How do these things reach inside the cell?
(c) Mention one point of difference between prokaryotic and eukaryotic cells. **[1+1+1=3]**

11. (a) Give scientific reasons for the following:- **[1+1=2]**
(i) Mosquitoes can be controlled by preventing stagnation of water though they do not live in water.
(ii) Raw vegetables and fruits are kept in refrigerators whereas jams and pickles can be kept outside.
(b) Complete the table given below related to some common plant and human diseases by filling the blanks (i) and (ii). **[1]**
(Do not copy the table. Write only the answers)

Disease	Causative agent	Mode of transmission
1) Typhoid	Bacteria	_____(i)_____
2) Citrus Canker	_____(ii)_____	Air

V. Answer the following questions in detail:

12. Given below is a diagram showing the structure of human sperm.
Study the same and answer the questions that follow. **[1+1+1+2=5]**



(a) Label the parts marked as **(i)** and **(ii)**.
(b) Name the organ which produces sperms in humans. What is the number of chromosomes present in the nucleus of the sperm?

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(c) Although two cells called gametes fuse, the product formed is a single cell called the zygote. Justify the statement giving one scientific reason.

(d) Draw a neat diagram showing the female reproductive organs in humans and label the following parts:-

(i) The organ which produces the female gametes

(ii) The part where fertilization occurs

. (iii) The part where embryo gets embedded

OR **[2+1+2=5]**

(a) Compare the reproduction in hydra and amoeba. (Give two differences)

(b) Why do frogs and toads move to ponds/lakes during rainy season?

(c) Diagrammatically represent the reproduction in amoeba. (Give two labellings)

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