

VIII SCIENCE FULL LENGTH TEST

M.M. 80

TIME : 3 HOURS

Instructions:

1. This question paper is comprised of three sections A, B and C.
2. Question No. 1 is Value Based Question and it is compulsory.
3. Sections A – Physics (26 Marks). Attempt section according to the syllabus taught.
4. Sections B – Chemistry (25 Marks). Attempt section according to the syllabus taught.
5. Sections C – Biology (29 Marks). Attempt section according to the syllabus taught.
5. Use of calculators is not allowed.

Section A – Physics

Topic: Force And Pressure

1. (i) Leaves or fruits fall on the ground due to [½]
(a) gravitational force (b) magnetic force
(c) electrostatic force (d) muscular force
(ii) Force of friction acts on the moving body in – [½]
(a) The same direction (b) the opposite direction
(b) Perpendicular direction (d) none of the above
2. Why porter wear turbans when they have to carry heavy loads on their heads? [1]
3. What is an electrostatic force? Why is it called a non-contact force? [2]
4. Do liquid and gases exert pressure on the walls of container in all direction? Give example to justify your statement. [2]
5. (a) On what factors do the effect of pressure depend? [1+2]
(b) A force 100N is applied on a rectangular slab having dimensions 110 cm × 20 cm. Find pressure.

Topic: Friction

1. Why does a matchstick light when strike it on a rough surface? [1]
2. On what factors does the fluid friction depend? [1]
3. Give reason for the following [2]
(i) Powder is sprinkled on the carom board
(ii) An aeroplane is shaped like a bird
4. 30 N force is needed to move an object from a rough surface. If we applied 10 N force horizontally on it, will the object move? Why? What will be the value of friction force? [2]
5. (a) What do you mean by drag? Give one example of drag force. [1+2]
(b) Write any four methods of reducing friction.

Topic: Sound

1. (I) Loudness of sound is determined by - [½]
(a) Frequency (b) Amplitude (c) Wavelength (d) Time period
- (II) Which of the following statements are correct? (1/2)
(i) Sound is produced by vibrations
(ii) Sound requires a medium for propagation
(iii) Light and sound both require a medium for propagation
(iv) Sound travels slower than light
- (a) (i) and (ii) (b) (i), (ii) and (iii) (c) (ii), (iii) and (iv) (d) (i), (ii) and (iv)
2. Define: [½+½]
(i) Frequency (ii) Time Period
3. A pendulum oscillates 80 times in 8 seconds. Find its time period and frequency. [2]
4. Write two difference between ultrasonic and infrasonic sound. [2]
5. (a) Name the parts of human ear which are responsible for the following function: [1+2]
(i) Collection of sound vibration from the air
(ii) Amplification of sound vibration
- (b) What are the major causes of noise pollution? And how can it be controlled?

Topic: Stars and The Solar System

1. (a) The stars forming a group that has a recognizable shape is called [½+½]
(i) Constellation (ii) Orion (iii) Light year (iv) Pole star
- (b) The planet with a system of well developed rings encircling, it is:
(i) Saturn (ii) Jupiter
(iii) Mercury (iv) Neptune
2. Define light year. How many kilometres make one light year. [1]
3. 'X' is a group of stars which is visible during summer season in the early part of the night. It can be seen clearly in the month of April in the northern part of the sky. It resembles a bowl with a handle. It also resembles a big kite with a tail. [2]
(i) What is the name for group of stars X?
(ii) Draw the structure of X.
(iii) How many bright stars are usually observed in X?
(iv) Which famous star can be located in the sky with the help of X?
4. Give reason for the following: [2]
(i) Pole star seem to be stationary when seen from the earth. Why?
(ii) Venus the hottest planet even though Mercury is closest to the Sun. Why?
5. Differentiate the following: [1+1+1]
(a) Stars and planets (b) Natural and artificial satellite
(c) Meteor and meteorite

Topic: Light

1. (a) Which of the following statements is correct regarding rods and cones in the human eye? [½+½]
(i) Cones are sensitive to dim light (ii) Cones are sensitive to bright light
(iii) Rods are sensitive to bright light (iv) Rods can sense color
- (b) We can see a non – luminous object when light :
(i) emitted by the object falls on the eye
(ii) is reflected from the object towards our eye
(iii) completely passes through the object
(iv) gets completely absorbed by the object

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2. Find the number of images of an object placed between two mirrors inclined at 90° to each other. [1]
 3. Write the Laws of Reflection. The angle between incident ray and reflected ray is 60° . What is the value of angle of incidence? [1+1]
 4. How is the phenomenon of reflection used in making a kaleidoscope? What are the application of a Kaleidoscope? [1+1]
 5. (a) An object placed 5m from a plane mirror is shifted by 2 m away from the mirror. What is the distance between the object and its image?
(b) Draw a labelled diagram of Human Eyes. [1+2]

Topic: Some Natural Phenomenon

1. (a) The tremendous electric charges in the atmosphere which produces sheet lightning in clouds are produced by the process of: [½+½]
(i) Friction (ii) Induction
(iii) Conduction (iv) Convection
(b) Which of the following cannot be charged by friction if held in hand?
(i) A plastic scale (ii) An inflated balloon
(iii) A copper rod (iv) A woollen cloth
2. Write two precautions should be taken during earthquake, when you are at home. [1]
3. Explain how does lightning conductor protects a building from getting struck by lightning. [2]
4. Define:
(i) Earthquake (ii) Seismic zone
5. (a) Why it is safer to use a wireless telephone instead of a landline telephone during lightning?
(b) If the metal clip used in the electroscope is replaced by an ebonite rod and a charged body is brought in contact with it, will there be any effect on the aluminium strips?

Section B - Chemistry

Topic : Synthetic Fibres and Plastics

1. Why Teflon is used is cookwares? [1]
2. Why Plastic containers are favoured for storing food? [1]
3. Write any one property and one use of melamine. [1]
4. What is rayon? Write its two uses. [2]
5. Write short notes on following :- [3]
(i) Plastic and health care industry
(ii) Thermoplastic and its uses
(iii) Disadvantages of Plastics

Topic : Metals and Non-Metals

1. Sodium and potassium are stored under kerosene oil. Why? [1]
2. Why copper is used to make hot water tanks and not steel? [1]
3. Explain the terms malleable and ductile. [1]
4. Can you store lemon pickle in an aluminium utensil? Explain. [2]

5. What happens when [3]
(i) Dilute sulphuric acid is poured on a copper plate?
(ii) Iron nails are placed in copper sulphate solution?

Topic : Coal and Petroleum

1. Name the Petroleum product used for surfacing roads. [1]
2. Why fossil fuels are exhaustible natural resources. [1]
3. What is coal tar? How is it useful to us? [1]
4. Describe how coal is formed from dead vegetation. What is this process called? [2]
5. (i) What is destructive distillation of coal? [1+2]
(ii) What is fuel? What are the characteristics of a good fuel?

Topic : Combustion and Flame

1. Why is water poured on wood to extinguish burning wood? [1]
2. At airports and petrol pumps hydrocarbon fire extinguishers are used not soda-acid fire extinguisher. Why? [1]
3. Why food considered fuel for our body? [1]
4. (i) Why do forest fires occur during hot summers? [1+1]
(ii) How is burning of fossil fuels thought to be related to global warming?
5. Explain various harmful effects of burning fuels. [3]

Topic : Chemical Effect of Electric Current

1. Does pure water conduct electricity if not, what can we do to make it conducting? [1]
2. Which gas accumulated around positive electrode and negative electrode when current chromium is passed through water? [1]
3. Why chromium is coated on taps made of iron? [1]
4. (i) A child staying in a coastal region tests the drinking water and also the seawater with compass. He finds that the compass needle deflects more in case of seawater. Can you explain the reason? [1+1]
(ii) Why do we use plastic to make electric plugs and switches?
5. (i) What are electrolytes? Give an example of weak and strong electrolyte. [3]
(ii) How will you prove that a given liquid is an electrolyte or a non electrolyte?

Topic : Pollution of Air and Water

1. Clear, transport water is not always fit for drinking. Comment [1]
2. What are the natural sources of air pollution? [1]
3. Define air pollution and marble cancer. [1]
4. Why does the increased level of nutrients in water affect the survival of aquatic organisms? [2]
5. (i) Write any two ways by which water pollution can be reduced. [3]
(ii) Though CO₂ is present in air in very small amount, then how can it act as a pollutant?

Section C - Biology

Attempt any 2 questions from this section each question carries 1 marks.

1. Name the chemicals used for the removal of weeds in crop fields. Give an example also.

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- Name the group of microbe which are unicellular and lacks cell wall.
 - What is an ecosystem?
 - Name the cell organelle responsible for the green colour of the leaves in plants.
 - The term “Metamorphosis” is not used while describing human development. Why?
 - What do you mean by term “Puberty”?

Attempt any 3 chapters from this section. Each section carries 9 marks.

Chapter 1 - Crop Production and Management

- Name the tool used with a tractor for sowing seeds in a field.
 - Mention any two advantages of using this tool. [½+½]
- Explain how soil gets affected by the continuous plantation of similar crops in a field. [2]
- Name and explain any two agriculture practice that is done after the maturation of cultivated crop. [2]
- Despite favourable climatic conditions, a farmer’s crop failed to give good yield. Give the possible reasons for this. [2]
- Classify the following crops into two groups according to sowing seasons and mention any 2 difference between these two groups (write in tabular column). [2]
Maize, paddy, mustard, wheat, gram, cotton, pea

Chapter 2 - Microorganisms: Friends and Foe

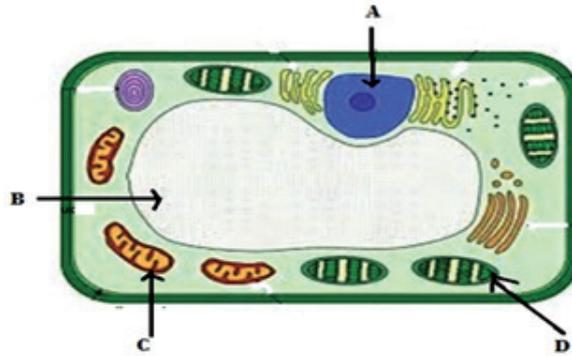
- Name the bacteria [1]
 - that lives in symbiotic association with leguminous plants
 - that converts milk into curd
- Name the most common vector for the communicable diseases? Name a disease spread by it?
 - How can we control the spread of the diseases caused by the above asked vector? [1+1]
- Polio drops are not given to the children suffering from diarrhoea. Why?
 - Why viruses are called “controversial organisms”? [1+1]
- What are antibiotics? What precautions must be taken while taking antibiotics? [2]
- Give reason: [1+1]
 - Fresh milk is boiled before consumption while processed milk stored in packets can be consumed without boiling.
 - Yeast is used in bakery and beverages industry.

Chapter 3 - Conservation of Plants and Animals

- How are even small animals important in an ecosystem? [1]
- How rock shelters found inside the Satpura National Park are important?
 - Satpura Tiger reserve is unique in the sense of tiger population. Mention the sense. [1+1]
- Is deforestation associated with global warming? Explain. [2]
- How national parks established by the government help in the conservation of biodiversity? [2]
- What are endangered species and where do we find information about them?
 - What are migratory birds? Give any two reason of their migration. [2]

Chapter 4 - Cell : Structure and Functions

1. Name the cells in human beings which are spindle (pointed at ends) in shape. Mentions its role also. [1]
2. Name the protruding cytoplasm that is formed by amoeba. Mention the two roles of this part? [2]
3. Name the type of cell to which bacteria belongs. How is it different from the cells present in animal or plants (mention two points). [2]
4. Label the parts of the plant cell and mention the role of any two organelles. [1+1]



5. Why do plant cell have an additional layer surrounding the cell membrane? What is this layer known as? [2]

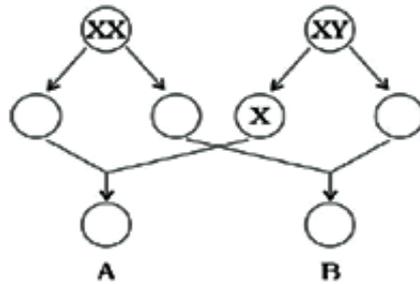
Chapter 5 - Reproduction in Animals

1. In the textbook, it is written that eggs are produced in human female reproductive organ. We see eggs of hen in market but never see a human female egg. Why? [1]
2. Give reason : [2]
 - (a) Sperms has a tail but ovum lacks it.
 - (b) Frogs lay hundreds of eggs in water.
3. Draw a well neat labelled diagram of human female reproductive system and label the parts where : [2]
 - (A) Embryo gets implanted
 - (B) Fertilization occurs
 - (C) Eggs are produced
 - (D) Sperms enter first
4. Differentiate between sexual and asexual reproduction. [2]
5. (a) What is cloning? Name the first cloned mammal. [2]
(b) Expand IVF? Why do couples go for IVF? [2]

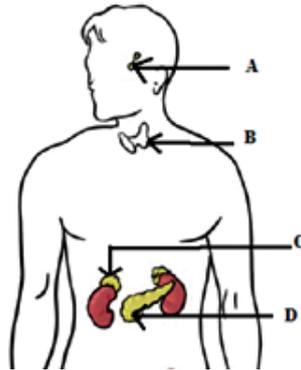
Chapter 6 - Reaching Age of Adolescence

1. Mention what different changes occurs in boys and girls during adolescence in : [1]
 - (a) Change in voice
 - (b) body shape

2. Fill in the blanks in the circles in given below figure and identify the sex of the child A and B. What did you conclude from this flow chart? [2]



3. Label the endocrine glands as marked A, B, C, D and answer the following: [2]



- (a) Name hormone secreted by D.
 (b) A disease associated with gland B.
4. What is HIV? Name the disease caused by HIV? Mention any two ways by which adolescents must do to maintain their physical health? [2]
5. In human females, each time during maturation and release of egg the inner wall of uterus thickens. Is this thickening permanent? Give reasons. [2]

