

**SPECTRA EXAMINATION**  
**SPECTRA CLASSES**  
**CLASS 8<sup>TH</sup>**  
**SUBJECT- SCIENCE**

TIME-3HR.

MM:80

**1. Fill in the blanks given below: [5]**

- a. Process of separation of different constituents from petroleum is called.....
- b. ....is the production of an exact copy of a cell any other living part or a complete organism.
- c. Time taken by an object to complete one oscillation is called.....
- d. The type of force responsible for a change in the stage of motion of the arrow is an example of a .....Force.
- e. If you pass current through copper sulphate solutions, copper gets deposited on the plate connected to the .....terminal of the battery.

**2. Answer the following in one word or one sentence:[5]**

- a. 6. What is a drag?
- b. 7. What is lightning?
- c. 8. What kind of lens is there in our eyes? Where does it form the image of an object?
- d. 9. Name the micro-organisms which can fix atmospheric nitrogen in the soil.
- e. 10. What is cloning?

**3. Multiple Choice Questions: [5]**

(i). An agricultural implement plough is used for:

- (a) Adding manure to the fields      (b) Sowing the seeds  
(c) Loosening the soil                      (d) Irrigating the fields

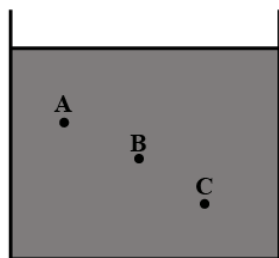
(ii). The organisms which do not have chlorophyll and are mostly heterotrophs are

- (a) Viruses                      (b) fungi                      (c) bacteria                      (d) algae

(iii). In the following cases fire can be extinguished by removing combustible substance except:

- (a) a building on fire                                      (b) a firecracker  
(c) a wood log on fire                                      (d) paper on fire

(iv). Fig. shows a container filled with water. Which of the following statements is correct about pressure of water?



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- (a) Pressure at A > Pressure at B > Pressure at C  
(b) Pressure at A = Pressure at B = Pressure at C  
(c) Pressure at A < Pressure at B > Pressure at C  
(d) Pressure at A < Pressure at B
- (v). Which statement is incorrect about endangered species?  
(a) Their number has decreased drastically.  
(b) They might become extinct in the near future.  
(c) They pose a danger to other animals.  
(d) Their natural habitat needs to be protected.

16. Match the following Questions: [5]

Muscular Force	Frequency
Implantation	Converging Mirror
Pitch	Surface Area
Concave Mirror	Wall of the Uterus
Pressure	Contact Force

17. What are communicable diseases? Explain with examples. [2]

**OR**

How does loudness of sound is affected by amplitude?

18. During which months do farmers grow mustard in India? [2]

**OR**

What is the application of chemical effects of electricity in our daily life? Give examples.

19. Write two difference between concave lens and convex lens ?[2]

**OR**

What do you understand by petrochemicals?

20. What are the changes seen in girls at the time of puberty? [2]

21. If you hold a piece of iron wire with a pair of tongs inside a candle flame or a Bunsen burner flame, what will you observe? Will it produce a flame? [2]

**OR**

It is difficult to cut cloth using a pair of scissors with blunt blades. Explain.

22. Explain why sliding friction is less than static friction.[2]

**OR**

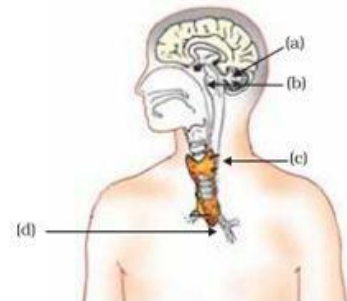
A pendulum oscillates 40 times in 4 sec. Find its time period and frequency.

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23. Label the missing parts of the endocrine glands.[4]



24. What is lightning conductor? Explain its uses. [3]  
25. What is mensuration cycle? Explain it with diagram. [4]  
26. Explain nitrogen cycle with suitable diagram? [4]

**OR**

Draw diagrams to show :

- (a) A liquid exerts pressure on the walls of container. [1]  
(b) Pressure exerted by a liquid at the bottom depends on the height of the column. [1]  
(c) An instrument which can be used to detect a charged body. [2]
27. Give examples to show that friction is both a friend and foe. [4]
28. (a) What do you mean by electroplating? How does it take place? [4]  
(b) Which properties of chromium metal make it suitable for electroplating it on car bumpers, bath taps and bicycle handlebars, etc., made of iron?
29. Name the following : [4]  
a. The layer of tissue that protects light sensitive inner parts of the eye and prevents internal reflection of light  
b. Tough opaque sheet of tissues that forms the outer covering of the eye  
c. The transparent, watery fluid found in between the cornea and the lens.  
d. The spot on the retina where an object forms the sharpest image.
30. Calculate the pressure when a force of 200N is exerted on an area of : (a) 10m<sup>2</sup> (b) 5m<sup>2</sup> . What force acting on an area of 0.5 m<sup>2</sup> will produce a pressure of 500 Pa? [4]
31. Soil preparation is one of the types of agricultural practices. What do you understand by soil preparation? [4]

**OR**

- (a) Name the three layers of earth. Draw a labelled diagram to show the structure of earth.  
(b) What is a seismograph? Draw a labelled diagram of a seismograph.

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[5]

32. A great variety of plants and animals exist on earth. They are essential for the well-being and survival of mankind. Today, a major threat to survival of these organisms is deforestation. We know that deforestation means clearing off forests and using that land for other purposes. Trees in the forest are cut for some of the purposes mentioned below:

Procuring land for cultivation.

Building houses and factories.

Making furniture or using wood as fuel.

Some natural causes of deforestation are forest fires and severe droughts. Deforestation increases the temperature and pollution level on the earth. It increases the level of carbon dioxide in the atmosphere. Ground water level also gets lowered. They know that deforestation disturbs the balance in nature. They were told by Professor Ahmad that if cutting of trees continues, rainfall and the fertility of the soil will decrease. Moreover, there will be increased chances of natural calamities such as floods and droughts. Recall that plants need carbon dioxide for photosynthesis. Fewer trees would mean that less carbon dioxide will be used up resulting in its increased amount in the atmosphere. This will lead to global warming as carbon dioxide traps the heat rays reflected by the earth. The increase in temperature on the earth disturbs the water cycle and may reduce rainfall. This could cause droughts. Deforestation is a major cause which leads to the change in soil properties. Physical properties of the soil get affected by plantation and vegetation. Recall from Class VII how trees prevent soil erosion. Fewer trees result in more soil erosion. Removal of the top layer of the soil exposes the lower, hard and rocky layers. This soil has less humus and is less fertile. Gradually the fertile land gets converted into deserts. It is called desertification. Deforestation also leads to a decrease in the water holding capacity of the soil. The movement of water from the soil surface into the ground (infiltration rate) is reduced. So, there are floods. The other properties of the soil like nutrient content, texture etc., also change because of deforestation.

1) Which among the following are some of the natural causes of deforestation?

- (a) Reusing
- (b) Recycling
- (c) Plantation
- (d) Forest fires

2) Due to the process of soil erosion fertile land gradually gets converted into deserts. This process is called

- (a) Desertification
- (b) Extinction
- (c) Eradication
- (d) Denitrification

3) Water holding capacity of soil..... due to deforestation.

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- (a) Increases
- (b) Decreases
- © Remains the same
- (d) None of the above

4) What are the effects of deforestation on the environment?

5) Mention few reasons for cutting of trees in forest.

[4]

33. Sound plays an important role in our life. It is a form of energy which makes us hear. Vibrating objects produce sound. Vibration is the to and fro or back and forth movement of an object. Sound needs a medium to travel. Hence, it cannot travel in a vacuum.

Human beings have a voice box or larynx which is present in their throat on the upper side of the windpipe. The larynx has two vocal cords which have a narrow slit between them so that air can pass through it. As the lungs throw the air out of the windpipe, it passes through the slit and hence allows the production of sound as the vocal cords start vibrating. Since sound travels in the form of waves, it is important to study about characteristics of waves. The three main properties of waves are Amplitude, frequency, and time period.

The magnitude of disturbance in the medium on either side of the mean value is called as Amplitude(A). Larger the amplitude, louder the sound. The number of oscillations/vibrations per second is called frequency. Which is expressed in Hertz (Hz). Time taken for one complete oscillation/vibration is the time period.

- i) Which part of the human throat is responsible for the voice produced by a human?
- ii) The form of energy which enable us to hear.
- iii) The rapid to and fro or up and down movement of an object from its mean position.
- iv) The maximum displacement of a vibrating object from its mean position. [4]

34. Read the passage given below and answer all questions. (Each carries 1 mark) Light is a form of energy which induces sensation of vision to our eyes. It becomes visible when it bounces off on surface and hits our eyes. Regular reflection takes place through a smoothed polished surface. The mirror outside the driver side of a vehicle is usually a spherical mirror and printed on such a mirror is usually a warning "Vehicles in this mirror are closer than they appear."

- i. Name the type of spherical mirror used outside the driver side of a vehicle.
- ii. What is the reason for this warning written on the mirror?
- iii. Draw a ray diagram showing the image formation in such kind of mirror.
- iv. When light become visible.

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