

This Question Paper contains 12 printed pages.
(Sections - A, B, C & D)

Sl.No. 112367

11 (E)
(MARCH, 2024)

For
Other
Study
Material



Time : 3 Hours]

[Maximum Marks : 80

Instructions :

- 1) Write in a clear legible handwriting.
- 2) This question paper has four Sections A, B, C & D and Question Numbers from 1 to 54.
- 3) All questions are compulsory. There are only internal options.
- 4) The numbers to the right represent the marks of the question.
- 5) Draw neat diagrams wherever necessary.
- 6) New sections should be written in a new page. Write the answers in numerical order.

SECTION - A

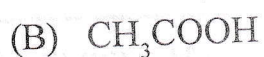
- Answer the questions 1 to 24 as directed. Each question carries 1 mark. [24]

Choose the correct option from given options :

- 1) Which of the following is a synthetic indicator? [1]
(A) Phenolphthalein
(B) Litmus
(C) Turmeric
(D) Onion

2) Which of the following is the molecular formula of Butanol?

[1]



3) The Kidneys in human beings are a part of the system for

[1]

(A) nutrition

(B) excretion

(C) respiration

(D) transportation

4) Tungsten is used almost exclusively for filaments of electric bulb because [1]

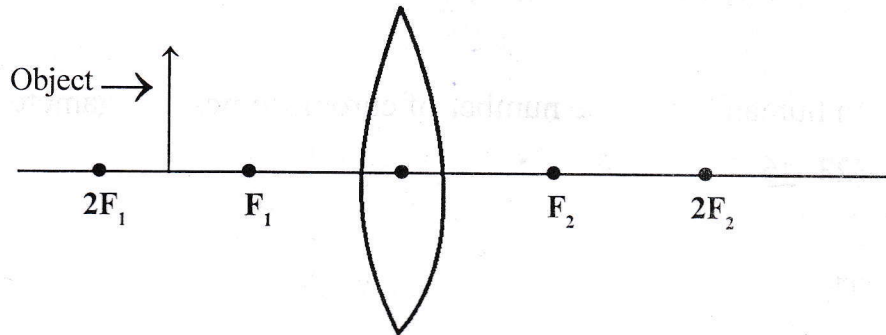
(A) its resistivity is high and melting point is low

(B) both the resistivity and melting point are high

(C) its resistivity is low and melting point is high

(D) both the resistivity and melting point are low

- 5) In the following figure, an object is placed between F_1 and $2F_1$. Where will be the image formed? [1]



- (A) Beyond $2F_2$
- (B) At F_2
- (C) Between $2F_2$ & F_2
- (D) Infinity
- 6) The least distance of distinct vision for a young adult with normal vision is about [1]
- (A) 25 m
- (B) 2.5 cm
- (C) 25 cm
- (D) 2.5 m

■ **Fill in the blanks with correct answer.**

- 7) The first member of homologous series of alkane is _____. [1]
(propane, methane, ethane)
- 8) In human being, the number of chromosomes in a gamete is _____. [1]
(23, 46, 22)
- 9) The _____ have thick elastic walls. [1]
(capillary, vein, artery)
- 10) The vegetative propagation by leaf is found in _____. [1]
(Bryophyllum, Rose, Grape)
- 11) If the opticians prescribes +2.0D, then the type of lens will be _____. [1]
(concave, convex, bifocal)
- 12) The _____ metal is found in liquid state at room temperature. [1]
(mercury, calcium, sodium)

■ **State whether the following statements are true or false.**

- 13) Galvanisation is a method of protecting steel and iron from rusting. [1]
- 14) The men have perfect pair of sex chromosomes. [1]
- 15) Iris does not control size of pupil. [1]
- 16) As the pH value of a solution increases from 7 to 14, it represents a decrease in concentration of H^+ ions. [1]

■ Answer the following questions as directed in one word or a sentence.

17) Which part of hind brain is responsible for maintaining the posture and balance of the body? *cerebellum* [1]

18) In Mendel's experiment of a pea plant, the traits that are expressed in F_2 generation are TT, Tt, tt. Sort the dominant traits and recessive trait. [1]

19) Define : Dispersion of Light. [1]

20) Which pair from the following is not appropriate? [1]

(A) Conductor - Silver

(B) Alloy - Nichrome

(C) Insulator - Nickel

■ Match the following correctly :

Hormones	Functions of Hormones	
21) Thyroxine <i>b</i>	a) Development of female sex organs	[1]
22) Testosterone <i>c</i>	b) Regulates metabolism for body growth	[1]
	c) Development of male sex organs	

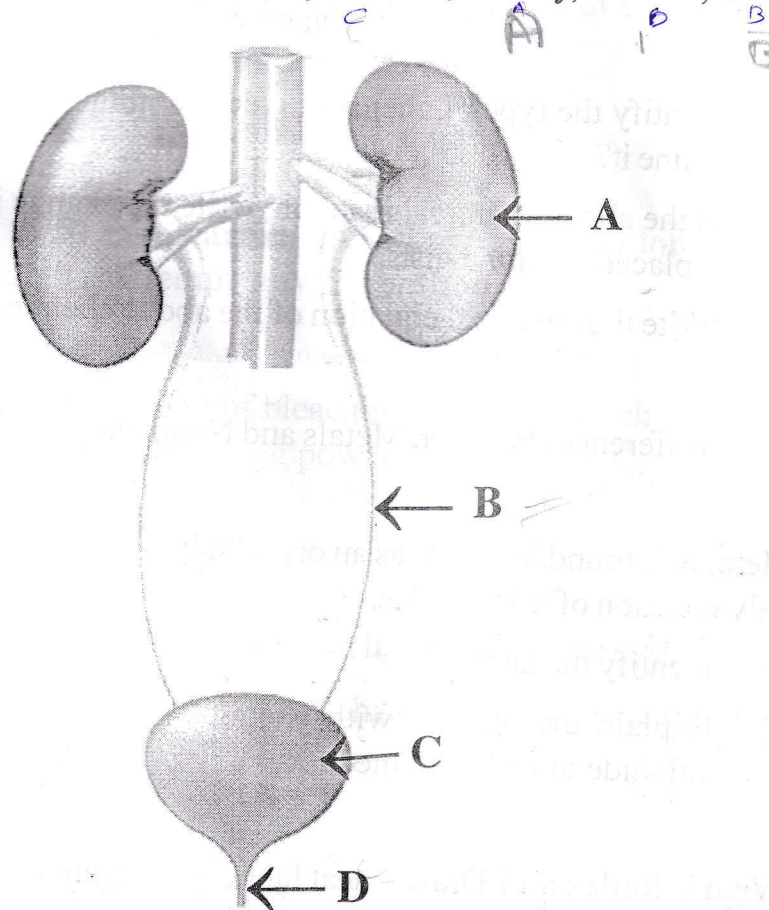
Trophic Level	Type of Consumer	
23) 2 nd Trophic level <i>b</i>	a) Secondary consumer	[1]
24) 3 rd Trophic level <i>a</i>	b) Primary consumer	[1]
	c) Tertiary consumer	

SECTION - B

- **Question No. 25 to 37 each carries 2 marks. Answer in short in 40 to 50 words approximately. Attempt any 9 questions only.** [18]

- 25) Oil and fat containing food items are flushed with nitrogen. Why? [2]
- 26) Write any two general properties of ionic compounds? [2]
- 27) Write two point of differences between Arteries and Veins? [2]
- 28) Draw a neat labelled diagram of longitudinal section of a flower? [2]
- 29) In a programmes a doctor gave guidance to students on sex education. He explained that many bacterial and viral infections can be transmitted by sexual act. [These diseases are gonorrhea, Syphilis HIV-AIDS, warts.] In this programme he also explained the different contraceptive methods such as mechanical barrier, hormonal balance and surgical to control population. These methods include condoms, loops, coppers - T, blocking of fallopian tube in female and blocking of vas deferens in male. From the above discussion, answer the following questions. [2]
- a) Classify the infections that can spread by bacteria and Virus.
- b) Write the mechanical barrier contraceptive methods for unwanted pregnancies?
- 30) a) Define power of accommodation of eye.
- b) Write the function of ciliary muscle? [2]
- 31) Draw the symbols of the following components in an electric circuit. [2]
- a) Combination of cells
- b) Plug Key (closed)
- c) Wires crossing (without joining)
- d) A variable resistance

- 32) How much work is done in moving a charge of 2C across two points having a potential difference 12V? [2]
- 33) Write down the characteristics of field lines around a bar magnet? [2]
- 34) Write the differences between Biotic factor and Abiotic factor? [2]
- 35) Write a note on Biological magnification? [2]
- 36) From the figure below, identify the names of parts A, B, C, D of excretory system in human being. [Urinary Bladder, Kidney, Urethra, Ureter] [2]

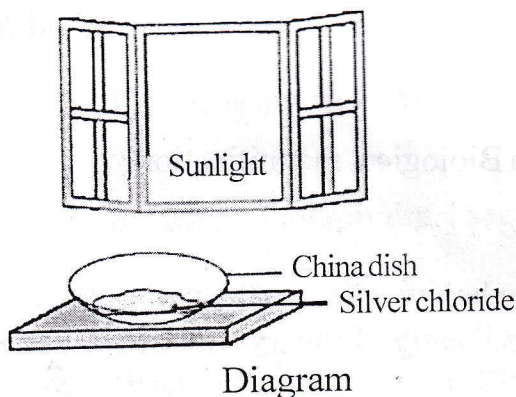


- 37) Explain the Right hand thumb rule. [Figure is compulsory] [2]

SECTION - C

■ Question No. 38 to 46 each carries 3 marks. Answer in short in 60 to 80 words approximately. Attempt any 6 questions only. [18]

38) Observe the following diagram and answer the following questions. [3]



- a) Identify the type of chemical reaction in the above diagram and also define it?
 - b) In the above chemical reaction, write the change in colour of salt that is placed in China dish?
 - c) Write the chemical equation of the above chemical reaction?
- 39) Write differences between Metals and Nonmetals? [3]
- 40) Metal X is found in nature as an ore of sulphide as XS. This metal is used in galvanisation of iron articles.
- a) Identify the metal X. [1]
 - b) Explain the process with chemical equations how to convert this sulphide ore XS into metal X. [2]
- 41) What is Reflex arc? Draw a neat labelled diagram of Reflex arc. [3]
- 42) Write the names of different types of Asexual reproduction. Explain any two types of asexual reproduction. (Figure is not Compulsory) [3]

- 43) a) Draw a neat labelled diagram of human male reproductive system. [2]
 b) Write the functions of testis? [1]
- 44) A concave lens has focal length of 15cm. At what distance should the object from the lens be placed so that it forms an image at 10 cm from the lens? Also, find the magnification produced by the lens. [3]
- 45) a) Draw a neat labelled ray diagram for the formation of image by a concave mirror. When the object is placed at centre of curvature. [2]
 b) Write the uses of concave mirror. *In our side view mirror dentist used for seeing teeth* [1]
- 46) Explain the practical applications of Heating effect of electric current with examples. [3]

SECTION - D

- Question No. 47 to 54 each carries 4 marks. Answer in long in 90 to 120 words approximately. Attempt any 5 questions only. [20]

- 47) Explain the manufacturing of bleaching powder with chemical reactions. Write any two uses of bleaching powder? [4]
- 48) Answer the following questions : [4]
 a) Explain the importance of pH in human digestive system.
 b) Explain the importance of pH change as the causes of tooth decay.
- 49) Answer the following questions : [4]
 a) Explain esterification reaction with a chemical equation and write uses of ester.
 b) Write the properties of ethanoic acid?

50) Answer the following questions :

[4]

a) What is photosynthesis? Write a balanced chemical equation of photosynthesis?

b) Draw a neat labelled diagram of open and closed stomatal pore.



51) Draw a neat labelled diagram of Human alimentary canal. Write the functions of organs of alimentary canal? [4]

52) A person is sitting in a library. He is able to read the details on the wall of the library which is at a distance of 15 Feet. He is not able to read the printed letters clearly of a book in front of him.

Answer the following questions on the basis of the above case.

a) What is the defect of vision of the person? [1]

b) Write the conditions of how this defect arises? [1]

c) How will you correct this defect? Also draw a diagram showing the correction of this defective eye of the person. [2]

53) Answer the following questions :

[4]

a) Draw a schematic diagram of domestic electric circuit.

b) What is the importance of fuse and earth wire in domestic electric circuit?

54) Answer the following questions :

[4]

a) Explain the formation of Ozone with equations?

b) How can you help in reducing the problem of waste disposal? Write your opinions?

