

*This Question Paper contains 8 printed pages.
(Section - A, B, C & D)*

Sl.No.

11 (E)
(MARCH, 2020)
(Old Course)

Time : 3 Hours]

[Maximum Marks : 80

Instructions :

- 1) Write in a clear legible hand writing.
- 2) This question paper has four Sections A, B, C & D and Question Numbers from 1 to 39.
- 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 following questions. [Question No. 1 to 16] [Each question carries 1 mark]
[16]

Fill in the given blanks.

- 1) The aqueous solution having pH 10 is _____ times less basic than aqueous solution having pH 8. **[1]**
- 2) Metallofullerenes _____ carbon atoms. **[1]**
- 3) _____ process is use to Determine the age of Ammonite, Trilobite and Dinosaur. **[1]**
- 4) If a radius of curvature is 10 cm of a mirror then focal length is _____ cm. **[1]**

True and False Questions

- 5) Carbon nanobud has mixed properties of both fullerenes and nanotube. [1]
- 6) In compound Microscope, The focal length of objective lens is more as compared to the focal length of eye-piece. [1]
- 7) Blue colour will scatter more as compared to Red colour because of fine particles in atmosphere. [1]

Select the proper choice from the given multiple choices :

- 8) Recently, which country launched Chandrayaan - 2? [1]
 (A) America (B) India
 (C) France (D) China
- 9) Which colour can be obtained by mixing the primary colour Red, Blue and Green? [1]
 (A) Magenta (B) Cyan
 (C) Yellow (D) White
- 10) Stamen and Carpel is present in flower, which type of is this? [1]
 (A) Male flower (B) Female flower
 (C) A lingual flower (D) Bisexual
- 11) Match the following columns and choose the correct option. [1]

Evidences for Evolution	Example
(i) Homologous organs	(a) Varieties of wild cabbage
(ii) Analogous organs	(b) Forelimbs of a frog and lizard
(iii) Evolution by stages	(c) Wings of bat and bird

- (A) (i)-(a), (ii)-(b), (iii)-(c) (B) (i)-(c), (ii)-(b), (iii)-(a)
 (C) (i)-(b), (ii)-(c), (iii)-(a) (D) (i)-(b), (ii)-(a), (iii)-(c)

Answer the following questions in short :

- 12) What is Pulsar? [1]
- 13) What is symbol of Variable Resistor? [1]
- 14) In which book pheasant, Great Indian bustards, florican, Hornbill etc. Species are published? [1]
- 15) Which is general formula of Alkyne series among C_nH_{2n} , C_nH_{2n-2} and C_nH_{2n+2} ? [1]
- 16) $O_2 \rightarrow O + O$ [1]
 $O_2 + O \rightarrow O_3$
 What is the name of the above process?

SECTION - B

Answer the following questions in 40 to 50 words. [Question no. 17 to 26].

[Each question carries 2 marks] [20]

- 17) Explain the electrical and thermal properties in carbon Nanotube. [2]
- 18) Write any four properties of Hormone. [2]
- 19) Name any four space programmes conducted by India and write its uses. [2]

OR

- 19) Explain about the star which you see in day time.
- 20) Explain the Interchange of O_2 and CO_2 in human body. [2]

OR

20) Complete the following Reactions

(1) Glucose $\xrightarrow{\text{in cytoplasm}}$ 2 pyruvic acid $\xrightarrow{\text{yeast}}$ -----.

(2) Glucose $\xrightarrow{\text{in cytoplasm}}$ 2 pyruvic acid $\xrightarrow{\text{In muscles of animals}}$ -----.

21) Explain vegetative propagation in leaf buds. [2]

22) "Energy conservation is our moral duty" - Explain it. [2]

23) What is commercial unit of Electrical Energy? Derive the relation of this unit with Joule. [2]

OR

23) Give Reason : In Pranav's bedroom because of short circuit one bulb is get fused but other bulb's are still on.

24) Write four characteristics of magnetic field lines. [2]

25) "Cleanliness is Godliness" Write the ways to make this slogan true. [2]

26) Give the equations for Industrial manufacture of Dihydrogen gas. [2]

OR

26) Write the uses of Sulphuric Acid.

SECTION - C

Answer the following questions in 60 to 80 words. [Question no. 27 to 34].

[Each question carries 3 marks] [24]

27) Explain scattering of light through colloidal solution. [3]

- 28) What is Nature of aqueous solution and chemical formula of salt which is produced during the Neutralisation Reaction of strong Acid-Base and weak Acid-Base? [3]

OR

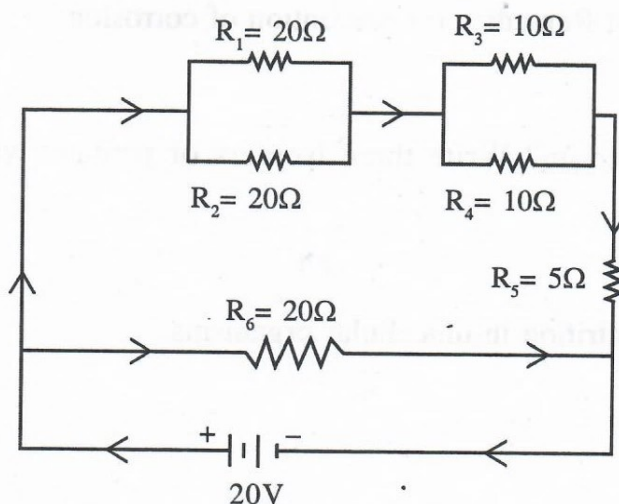
- 28) Define solute, solvent and solution with example.
- 29) Which gland affected if we do not consume salt which contains iodine. Explain it. [3]
- 30) Explain the scientific solution to control the increasing population of India. [3]
- 31) Explain the process of sex determination of a child in mother's womb. [3]

OR

- 31) Explain the Acquired and Inherited characteristics in Animals.
- 32) Write any three points which differentiate L.P.G. and C.N.G. [3]

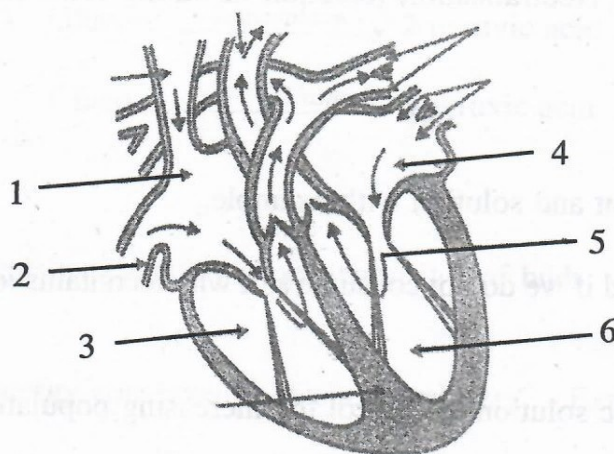
OR

- 32) Write the number of carbon, temperature range and uses of Naphtha, Diesel and Lubricating oil.
- 33) As shown in figure the resistance are connected with a 20 V battery. Determine
 (1) Equivalent Resistance
 (2) Current flowing through the circuit [3]



34) Write the name of the parts in this given figure.

[3]



SECTION - D

Answer the following questions in 90 to 120 words. [Question No. 35 to 39] [Each question carries 4 marks] [20]

- 35) 1) Name the Metal and their symbol on which Electrochemical Reduction is used.
- 2) Write the chemical equation of cathode and Anode during the Electrochemical Reduction of Aluminium.

[4]

OR

35) Write any eight Remedies for prevention of corrosion.

36) What is isomerism? Write three isomers of pentane with their structural formula.

[4]

37) Explain the Nutrition in unicellular organisms.

[4]

38) Explain the working of DC Generator with figure.

[4]

OR

38) Explain the Electric circuit with figure which is used in our house.

39) A convex lens forms a real and inverted image of an object at a distance of 80 cm from it. What will be the distance of an object if size of an image is same as the object? Determine the power of lens. [4]

