This Question Paper contains 20 printed pages.
(Part - A & Part - B)

Day 2

Sl.No. 0200937

11 (E)

(MARCH, 2018)
(NCERT OTHERS)

પ્રશ્ન પેપરનો સેટ નંબર જેની સામેનું વર્તુળ OMR શીટમાં ઘટ્ટ કરવાનું રહે છે.
Set No. of Question Paper, circle against which is to be darken in OMR sheet.
02

Question Paper Reading 15 Minutes
Part - A : Time : 1Hour / Marks : 50
Part - B : Time : 2 Hours / Marks : 50

(Part - A)

Time : 1 Hour] ***[Maximum Marks : 50***

Instructions :

1) **There are 50 Multiple Choice type Questions in Part - A and all questions are compulsory.**
2) **The questions are serially numbered from 1 to 50 and each carries 1 mark.**
3) **Read each question carefully, select proper alternative and answer in the O.M.R. sheet.**
4) **Separate OMR sheet is given for answering these questions. The answer of each question is to be given by darkening the circle against options (A), (B), (C), (D). Circle ● representing the most correct answer is to be darken with ball pen.**
5) **Set No. of Question Paper printed on the upper - most right side of the Question Paper, the same is to be written in the space provided in the OMR sheet and circle depicting the correct set No. is to be darken with ball pen.**

Rough Work

1) Wild Cabbage is being cultivated for thousands of years and humans have generated Broccoli, Cauliflower, Kale etc. from it. This is an example of

(A) Geographic isolation (B) Genetic drift
(C) Natural selection (D) Artificial selection

2) One of the following traits of the parents cannot be passed on their future generations. This trait is

(A) Scarred Chin (B) Pointed Chin
(C) Cleft Chin (D) Broad Chin

Rough Work

3) The wings of a housefly and wings of a sparrow are an example of

(A) Respiratory organs

(B) Vestigial organs

(C) Analogous organs

(D) Homologous organs

4) Most of the source of energy we use represent stored solar energy. Which of the following is not ultimately derived from the sun's energy?

(A) Fossil fuels (B) Wind energy

(C) Geothermal energy (D) Bio-mass

5) Which of the following constitute a food-chain

(A) Goat, Cow and Elephant

(B) Grass, Goat and Human

(C) Grass, Wheat and Mango

(D) Grass, Fish and Goat

6) Where should an object be placed in front of a convex lens to get a real image of the same size of the object?

(A) At infinity

(B) At twice the focal length of convex lens

(C) At the principal focus of the lens

(D) Between the optical centre of the lens and its principal focus

7) Power of a lens is –4 Dioptres its focal length is

(A) –0.25m (B) –40cm

(C) 4m (D) –25m

Rough Work

8) The refractive indices of some media are given below

Medium	Refractive index
X	1.51
Y	1.72
Z	1.83
W	2.42

In which of these is the speed of light minimum and maximum, respectively.

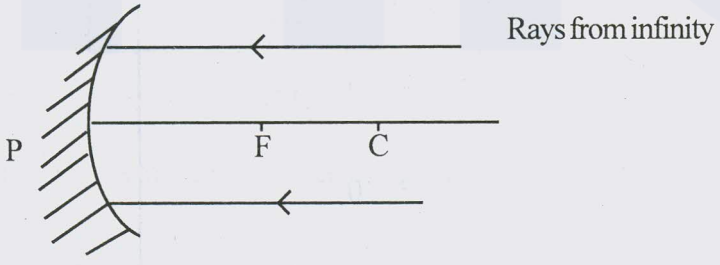
(A) W - minimum, X - maximum

(B) Z - minimum, W - maximum

(C) X - minimum, W - maximum

(D) X - minimum, Z - maximum

9) Where will be the image formed when the ray falling on the concave mirror are coming from infinity?



(A) Beyond C

(B) At 'C' (centre of curvature)

(C) At 'F' (focus)

(D) Between pole and focus

Rough Work

10) A student of class 9 is not able to see clearly the black board question when seated at a distance of 6m from the board, the defect he is suffering from is

(A) Presbyopia

(B) Hypermetropia

(C) Myopia

(D) Astigmatism

11) An electric bulb is connected to a 220V generator. The current is 0.50 Ampere. What is the power of the bulb?

(A) 110 Watts

(B) 220 Watts

(C) 440 Watts

(D) 100 Watts

12) A house is fitted with 10 tubes of 40W. If all tubes are lighted for 10 hours and if the cost of one unit of electricity energy is ₹ 2.50 the total cost of electricity consumption is

(A) ₹ 25

(B) ₹ 20

(C) ₹ 100

(D) ₹ 10

13) An electric geyser has rating 2000W 220V on it. What is the minimum current rating of fuse wire that may be required for use with this geyser?

(A) 15 A

(B) 10 A

(C) 5 A

(D) 20 A

14) If the potential difference between the ends of a fixed resistor is halved the electric power will become.

(A) Double (B) One-Fourth

(C) Half (D) Four times

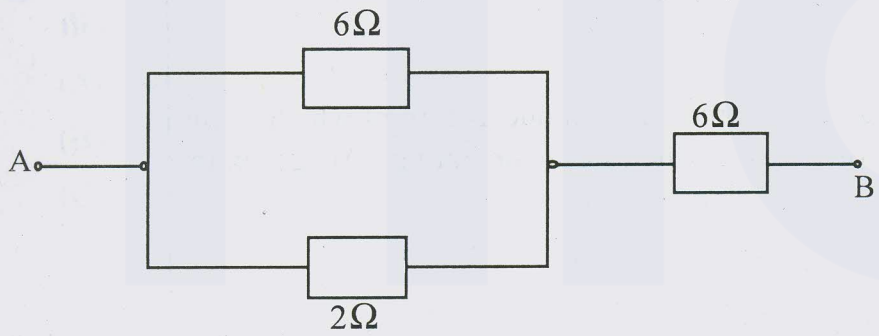
Rough Work

15) The materials of electric heating devices are usually made of:

(A) Nichrome (B) Bronze

(C) Tungsten (D) Argon

16) The figure given below shows three resistors



The Equivalent resistance between A and B is

(A) $6\frac{2}{3}\ \Omega$ (B) $14\ \Omega$

(C) $1\frac{5}{7}\ \Omega$ (D) $7\frac{1}{2}\ \Omega$

Rough Work

17) The essential difference between AC generator and a DC generator is that

(A) AC generator will generate a higher voltage

(B) DC generator will generate a higher voltage

(C) AC generator has an electromagnet while a DC generator has permanent magnet

(D) AC generator has slip rings, while DC generator has commutator

18) The phenomena of Electromagnetic Induction is

(A) producing induced current in a coil due to relative motion between a magnet and the coil

(B) the process of generating magnetic field due to a current passing through a coil

(C) the process of charging a body

(D) the process of rotating a coil of an electric motor

19) While finding the direction of Induced current which of the following rule is used, when we are operating a AC generator (Alternating Current generator)

(A) Flemming's right hand rule

(B) Maxwell's rule

(C) Flemming's Left hand rule

(D) Right hand thumb rule

20) The frequency of direct current (D.C) is

(A) 60 Hz

(B) 50 Hz

(C) 0 Hz

(D) 100 Hz

Rough Work

21) The following reaction is an example of

$4NH_3(g) + 5O_2(g) \rightarrow 4NO(g) + 6H_2O(g)$

(i) displacement reaction

(ii) combustion reaction

(iii) redox reaction

(iv) neutralisation reaction

(A) (iii) and (iv) (B) (ii) and (iii)

(C) (i) and (iv) (D) (i) and (ii)

22) Methane on combustion gives

(A) Both CO_2 and H_2O (B) H_2O

(C) CO_2 (D) Neither CO_2 nor H_2O

23) What happens when dilute hydrochloric acid is added to iron fillings?

(A) No reaction takes place

(B) Chlorine gas and iron hydroxide are produced

(C) Hydrogen gas and iron chloride are produced

(D) Iron salt and water are produced

24) An element X on exposure to moist air turns reddish-brown and a new compound Y is formed. The substance X and Y are

(A) X = Cu, Y = CuO (B) X = Ag, Y = Ag_2S

(C) X = Fe, Y = Fe_2O_3 (D) X = Al, Y = Al_2O_3

25) Which of the following can be decomposed by the action of light

(A) AgCl (B) KCl

(C) NaCl (D) CuCl

Rough Work

26) In which of the following pairs, both are acidic salts?

(A) CH_3COONa, K_2CO_3 (B) Na_2SO_4, K_2SO_4

(C) KCl, KNO_3 (D) $CuSO_4, AgNO_3$

27) Which of the following is incorrectly matched?

(A) Curd - Lactic acid

(B) Orange - Citric acid

(C) Tomato - Tartaric acid

(D) Ant sting - Methanoic acid

28) Metal A + Salt Solution of B $\rightarrow$ Salt Solution of A + Metal B. Which is correct out of the following.

(A) A is more reactive than B

(B) B is more reactive than A

(C) Reactivities of A and B are same

(D) None of the above

29) The pH of our body varies between

(A) 6.0 to 6.8

(B) 7.0 to 7.8

(C) 5.0 to 5.8

(D) None of the above

30) Fresh Milk has a pH of 6. When milk changes into curd, the pH value will

(A) become less than 7

(B) become more than 7

(C) become 7

(D) remain Unchanged

Rough Work

31) An element reacts with Oxygen to give a compound with a high melting point. The element is likely to be

(A) Carbon

(B) Silicon

(C) Iron

(D) Calcium

32) The electronic configurations of three elements X, Y and Z are

X - 2,8

Y - 2,8,6

Z - 2,8,1

Which of the following is correct?

(A) Y is a metal

(B) Z is a non-metal

(C) X is a metal

(D) X and Y are non-metals and Z is a metal

33) Arrange the following metals in the order of their decreasing reactivity : Fe, Cu, Mg, Ca, Zn, Ag

(A) Ca > Mg > Zn > Fe > Cu > Ag

(B) Ca > Zn > Cu > Mg > Ag > Fe

(C) Ca > Zn > Mg > Cu > Ag > Fe

(D) Ca > Mg > Fe > Zn > Cu > Ag

34) Out of the following Oxides, the amphoteric oxide is

(A) P_2O_5 (B) Al_2O_3

(C) Fe_2O_3 (D) N_2O

(P.T.O.)

Rough Work

35) The elements whose Oxides can turn litmus solution blue are

(A) Potassium and Magnesium

(B) Sodium and Carbon

(C) Carbon and Sulphur

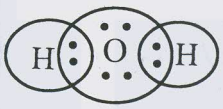
(D) Magnesium and Sulphur

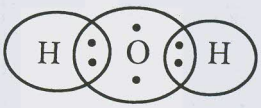
36) In the esterification reaction, acid acts as a _____

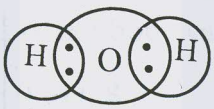
(A) Reactant (B) Product

(C) Catalyst (D) None of the above

37) The correct electron dot structure of a water molecule is

(A) 

(B) 

(C) 

(D) H - Ö - H

38) Bromine reacts with saturated hydrocarbon at room temperature in the

(A) Presence of Sunlight

(B) Presence of Water

(C) Absence of Sunlight

(D) Presence of Hydrochloric acid

Rough Work

39) An element X is placed in group 13 and third period of the Periodic Table. It burns in oxygen to form an oxide which is amphoteric in nature. Identify the chemical formula of its chloride.

(A) $GaCl_3$ (B) BCl_2

(C) CCl_4 (D) $AlCl_3$

40) In the third period of Periodic Table the element having smallest size is

(A) Cl (B) S

(C) Na (D) Si

41) The breakdown of pyruvate to give Carbon dioxide, water and energy takes place in

(A) Chloroplast (B) Mitochondria

(C) Cytoplasm (D) Nucleus

42) What is the source of O_2 liberated during photosynthesis?

(A) CO_2 (B) H_2O

(C) $C_6H_{12}O_6$ (D) None of these

43) Photoreceptors and phonoreceptors respectively detect

(A) Taste and Sight (B) Sound and Smell

(C) Smell and Taste (D) Sight and Sound

(P.T.O.)

Rough Work

44) Iodine is necessary for thyroid gland to make thyroxin hormone which regulates

(A) Carbohydrate Metabolism

(B) Protein Metabolism

(C) Fat Metabolism

(D) All of these

45) The plant hormones which regulate growth of plant are

(A) Cytokinin and Auxin

(B) Auxin and Gibberellin

(C) Cytokinin and Gibberellin

(D) All of these

46) Which of the following are cerebral reflexes?

(i) a person pulls away his hand on touching a hot object

(ii) a person spits out immediately when a fly enters his mouth while talking

(iii) a person walking bare foot lifts his foot at once on stepping on to a nail

(iv) a person's pupil contracts at once in the presence of bright light.

(A) (iii) and (iv)

(B) (ii) and (iii)

(C) (i) and (ii)

(D) (ii) and (iv)

Rough Work

47) In a sexual reproduction, two offsprings having the same genetic material and same body features are called

(A) Clones

(B) Twins

(C) Callus

(D) Chromosomes

48) The sexually transmitted disease which is caused by bacteria is

(A) Gonorrhoea

(B) Diarrhoea

(C) Malaria

(D) AIDS

49) The correct sequence of organs in the male reproductive system for the transport of sperms is

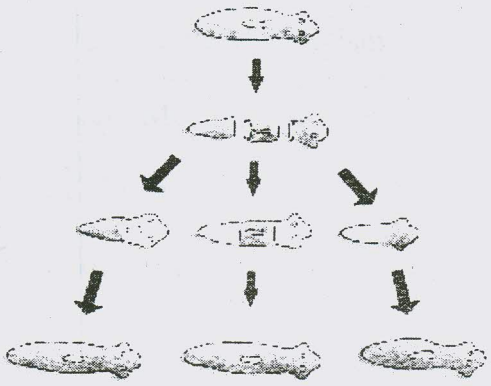
(A) Testis → Urethra → Ureter

(B) Testis → Ureter → Urethra

(C) Testis → Vasdeferens → Urethra

(D) Testis → Vasdeferens → Ureter

50) The type of reproduction taking place is



(A) Regeneration

(B) Fragmentation

(C) Budding

(D) Fission

Rough Work

11 (E)

(MARCH, 2018)
(NCERT OTHERS)

(Part - B)

Time : 2 Hours] ***[Maximum Marks : 50***

Instructions :

1) **Write in a clear hand writing.**
2) **There are four sections in Part - B of the question paper and total 1 to 18 questions are there.**
3) **All questions are compulsory. Internal options are given.**
4) **The numbers at right side represents the marks of the questions.**
5) **New section may be started on a new page of answer book.**
6) **It is advisable to maintain sequence.**

SECTION - A

■ **Answer the questions 1 to 5 in short. (2 marks each)**

1) What does one mean by exothermic and endothermic reactions? Give one example of each. **[2]**

2) Write an equation to show the reaction between plaster of Paris and water. **[2]**

3) Name two metals which will displace hydrogen from dilute acids and two metals which will not. **[2]**

4) Give the four uses of concave mirrors. (½ Mark each) [2]

OR

An object 5.0 cm in length is placed at a distance of 20cm in front of a convex mirror of radius of curvature 30cm. Find the position of the image its nature and size.

5) When a 12V battery is connected across an unknown resistor there is a current of 2.5 mA in the circuit. Find the value of resistance of the resistors. [2]

OR

On what factors does the resistance of a conductor depend? What is the SI unit of resistance?

SECTION - B

■ **Answer the questions 6 to 10 in short. (2 marks each)**

6) What is meant by the power of lens? What is its SI unit? Name the type of lens whose power is positive, A lens has power - 2.5D. Which type of lens it is? (½ marks each). [2]

7) Why do the stars twinkle? [2]

8) What are the advantages and disadvantages of using a Solar Cooker? Two points each of advantage and disadvantage. [2]

9) Why is damage to the Ozone layer a cause for concern? What steps are being taken to limit this damage? [2]

OR

What is a food chain? Mention the trophic levels in a food chain.

10) Suggest some approaches towards the conservation of forest. [2]

SECTION - C

Answer the following questions 11 to 15 in brief (3 marks each).

11) Draw the structure of a neuron and explain its function. [3]

12) Draw a diagram illustrating fertilisation in a flowering plant and label it and state one function of Anther, style and ovary. [3]

OR

Draw a diagram of female reproductive system and label it. State one function each of ovaries, oviduct and uterus

13) Compare and contrast the arrangement of elements in Mendeleev's Periodic Table and modern Periodic Table [3]

14) What are various evidences to trace evolutionery relationships? [3]

15) a) When does an electric short circuit occur?

b) What is the function of earth wire? Why is it necessary to Earth Metallic appliances. [3]

OR

Draw a schematic diagram of domestic wiring system and write two of its main features. [1+2=3]

SECTION - D

■ **Answer the following questions 16 to 18 in detail (5 marks each).**

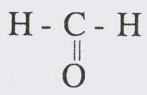
16) a) What is Soap?

b) Describe the structure of a soap molecule with the help of diagram.

c) Explain the cleansing action of soap. Draw diagram to illustrate your answer. **[5]**

OR

a) How would you name the following compound?



b) What are isomers?

c) Give an example of homologous series. Give two properties of it.

d) What would be the electron dot structure of a molecule of sulphur which is made up of eight atoms of sulphur?

17) Draw the cross-section of human heart and discuss the flow of blood in human heart. **[5]**

OR

Draw the diagram of human digestive system and describe the function of enzymes in it.

18) a) What are the three common defects of vision?

b) What do you mean by a person having defect called near-sightedness? Draw the diagrams of this type of defective eye, and correction of the defect. **[5]**

