

• Part-A : Time : 1 Hour 15 minutes / Marks : 50 • Part-B : Time : 2 Hours / Marks : 50

PART-A

Time : 1 Hour 15 Minutes]

011(E)

[Maximum Marks : 50

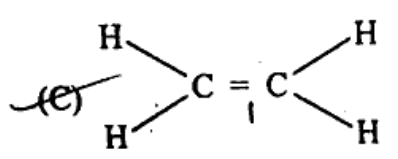
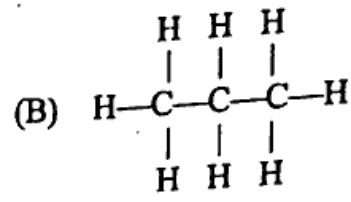
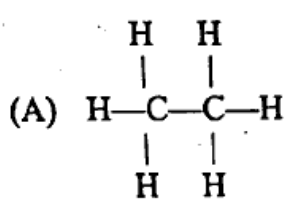
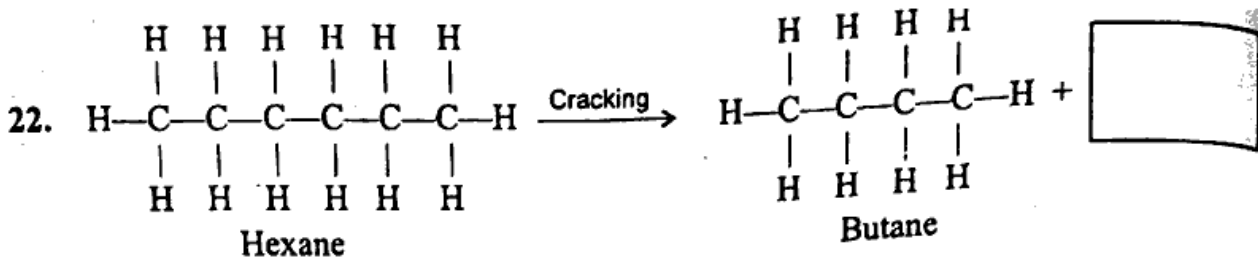
- Instructions :
1. There are 50 Multiple Choice Questions (M.C.Q.) in Part - A and all questions are compulsory.
  2. The questions are serially numbered from 1 to 50 and each carries 1 mark.
  3. Read each question carefully, select proper alternative and answer in the O.M.R. sheet.
  4. The OMR sheet is given for answering the questions. The answer of each question is represented by (A) , (B) , (C) , (D) . Darken the circle ● of the correct answer with ball-pen.
  5. Set No. of Question Paper printed on the upper-most right side of the Question Paper is to be written in the column provided in the OMR sheet.
  6. Rough work is to be done in the space provided for this purpose in the Test Booklet only.

1. The distilled water acts as \_\_\_\_\_ for the electricity.  
(A) Conductor (B) ~~Insulator~~ (C) Semi-conductor (D) None of above
2. Which type of current is obtained from a battery?  
(A) ~~DC current~~ (B) Current of AC & DC both  
(C) AC current (D) Depends on type of battery
3. Which of the following statement is false ?  
(A) The direction of magnetic field line is from N to S.  
(B) Magnetic fields form close loops.  
(C) The region where the magnetic field lines are at a close distance from each other will be strong magnetic field.  
(D) ~~Magnetic lines can cross each other.~~
4. Which of the following coloured wire is accepted traditionally as a neutral wire.  
(A) ~~Green~~ (B) White (C) Black (D) Red
5. Which of the following can be measured as light year ?  
(A) Age of sun (B) Speed of light  
(C) Circumference of earth (D) ~~Intensity of sunlight on surface of earth~~
6. Poles of mars is covered by \_\_\_\_\_  
(A) ~~Dry ice~~ (B) Ice (C) Nitrogen (D) Iron
7. In which of the following planet does the Sun "rise in West & sets in the East ?  
(A) Mars (B) Saturn (C) ~~Venus~~ (D) Mercury
8. Matter in the core region of the sun is in \_\_\_\_\_ state.  
(A) gaseous (B) solid (C) liquid (D) ~~plasma~~

9. Which of the following statement is incorrect ?  
(A) pH scale ranges between 0 to 14  
~~(B)~~ pH scale is applicable to only non-aqueous solutions  
(C) pH scale is presented by S.P.L. Sorensen  
(D) pH scale is applicable to only aqueous solutions
10. Which of the following is added by a farmer to make acidic soil neutral ?  
(A) Gypsum (B) Lime (C) Urea (D) None of above
11. Which of the following substance is an antacid ?  
(A) NaCl (B) HCl ~~(C)~~ Mg(OH)<sub>2</sub> (D) H<sub>2</sub>SO<sub>4</sub>
12. Which formula is correct ?  
~~(A)~~ Mole = Molecular mass / Weight (B) Mole = Weight / Litre  
(C) Mole = Weight / Molecular mass (D) Mole = Molecular mass / Litre
13. Which alloy is used to Solder the electric wires ?  
(A) Copper + Zinc ~~(B)~~ Lead + Tin (C) Aluminium (D) Copper + Tin
14. Section A contains name of metal & B contains its mineral, Match A & B to obtain correct pair:

Section-A	Section-B
(a) Iron	(i) Dolomite
(b) Aluminium	(ii) Siderite
(c) Copper	(iii) Bauxite
(d) Calcium	(iv) Malachite

- (A) (a - i), (b - ii), (c - iii), (d - iv) (B) (a - iii), (b - iv), (c - i), (d - ii)  
~~(C)~~ (a - ii), (b - iii), (c - iv), (d - i) (D) (a - i), (b - iii), (c - iv), (d - ii)
15. Which of the formula is true for Aluminium ?  
~~(A)~~ Al<sub>2</sub>O<sub>3</sub> (B) Al<sub>2</sub>O<sub>3</sub> · H<sub>2</sub>O (C) Al<sub>2</sub>O<sub>3</sub> · 2H<sub>2</sub>O (D) NaAlO<sub>2</sub>
16. With which of the following element carbon does not give reaction ?  
(A) Dichlorine gas ~~(B)~~ Di-hydrogen gas  
(C) Dilute hydrochloric acid (D) Di-oxygen gas
17. Which of the following gases is used as a preservative in juice of fruits and Jams?  
(A) NH<sub>3</sub> ~~(B)~~ SO<sub>2</sub> (C) H<sub>2</sub> (D) CO<sub>2</sub>
18. Which of the following reaction is responsible to obtain vegetable ghee from vegetable oils in presence of a catalyst Nickel ?  
(A) Hydrogenation (B) Chlorination (C) Both A & B (D) None of above
19. Which gas is filled at a high pressure in cylinders of house hold cooking gas ?  
(A) Methane ~~(B)~~ Butane ~~(C)~~ Ethane (D) Propane
20. Which is the formula of Propane ?  
(A) CH<sub>4</sub> ~~(B)~~ C<sub>3</sub>H<sub>8</sub> (C) C<sub>2</sub>H<sub>6</sub> (D) C<sub>4</sub>H<sub>10</sub>
21. Which of the following shows the differential sequence of hydrogen and carbon in series ?  
(A) CH (B) CH<sub>3</sub> ~~(C)~~ CH<sub>2</sub> (D) CH<sub>4</sub>



(D) None of A, B and C

23. What is called the solution of ethanol containing 5% water ?  
 (A) Beer (B) Rectified spirit (C) Varnish (D) Perfume

24. Which of the following is the use of acetic acid ?  
 (A) Preparation of vinegar (B) As a reagent  
 (C) White lead (D) All of the above given

25. Which of the following functional group is attached to the hydrocarbon in molecule of soap?



(A)  $\text{SO}_3^- \text{Na}^+$  (B)  $\text{COO}^- \text{Na}^+$  (C)  $-\text{COOH}$  (D) None of A, B & C

26. Name the mode of nutrition absorbed by the organisms who depend on dead and decaying organic materials ?

(A) Parasitic nutrition (B) Commensalism  
 (C) Saprophytic nutrition (D) Both A and B

27. Which of the following structure is responsible for transportation of water and minerals ?

(A) Vessel (B) Sieve tube (C) Cells (D) Companion cells

28. Section A contains the name of organs and Section B contains its functions. Match the following.

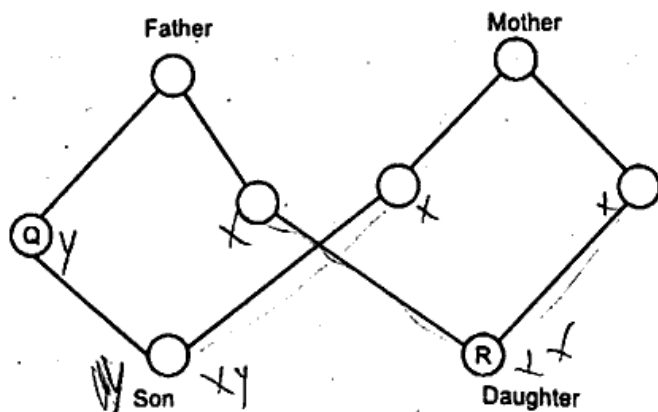
Section - A	Section - B
(a) Heart	(i) Circulation of blood
(b) Root	(ii) Nephron
(c) Kidneys	(iii) Transportation of water.

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

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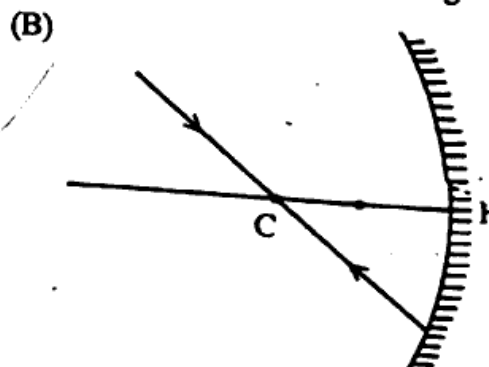
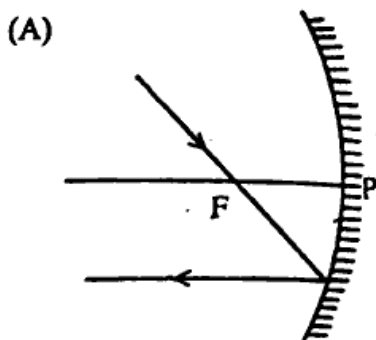
29. What is the double walled cup shaped structure at the upper end of a Nephron called as ?  
(A) Septa (B) Henlay's Septa  
(C) Blood Vessels (D) Bowman's Capsule
30. Which of the following is responsible to allow the flow of blood due to contraction of right ventricle?  
(A) Aorta (B) Lymph Vessels (C) Veins (D) Blood Vessels
31. Bending of the shoot of the plant in response to light is known as ?  
(A) Geotropism (B) Thigmotropism (C) Thermonesty (D) Photonasty
32. Which of the following is a mis-matched pair  
(A) Adrenaline : Pituitary gland (B) Estrogen : Ovary  
(C) Pancreas : Insulin (D) Progesterone : Ovary
33. Asexual reproduction is  
(A) A fusion of specialized cells  
(B) A method producing genetically identical offsprings  
(C) A method by which all types of organisms are produced  
(D) A method in which more than one parent is involved
34. Which family planning surgery is generally adapted by ladies for birth control ?  
(A) Tubectomy (B) Diapharagm (C) Copper-T (D) Vasectomy
35. The organs which perform different functions but have the same basic structure are known as ?  
(A) Homologous organs (B) Homolytic organs  
(C) Analogous organs (D) Analytic organs
36. The following chart shows F1 gametes of two parents.

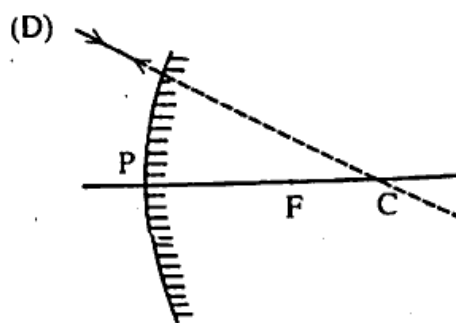
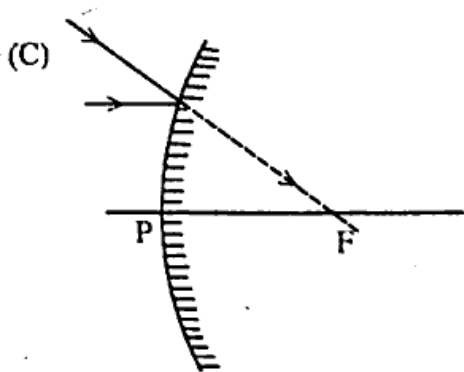


Find the possible matches from the following alternatives.

	Q	R
<del>(A)</del>	X	XX
<del>(B)</del>	Y	XX
(C)	X	XY
(D)	Y	XY

37. The structural and functional unit of environment is known as ?  
(A) Food chain (B) Food web  (C) Ecosystem (D) None of above
38. Which of the following is not true to keep a control on the garbage formed in your city?  
(A) To buy a battery which can be again recharged  
(B) To donate your old clothes & shoes  
(C) To reuse the paper on both sides  (D) To buy disposable products
39. To reduce the use of LPG by making use of solar energy is an example of  
(A) Recycle (B) Reuse  (C) Reduce (D) None of above
40. Which award has been recently instituted by Government of India in remembrance of Amrita Devi Bishnoi for the conservation of wild life  
(A) Amrita Devi Bishnoi State award (B) Amrita Devi Financial award  
(C) Amrita Devi Bravery award  (D) Amrita Devi Bishnoi National award
41. Which of the following techniques can be used as a top-down access in preparation of scientific equipments and machinery parts.  
(A) Carving (B) Cutting (C) Moulding.  (D) All A, B and C
42. Which of the following material will you select to demolish a water tank in your village such that no other destruction is possible to near by residences.  
(A) Nenogolf (B) Nenoaluminum  (C) Nenosilver (D) Nenocopper
43. Which of the following lens of focal length 10 cms, 20 cms, 25 cms & 50 cms has maximum power.  
(A) 50 cms (B) 20 cms (C) 25 cms  (D) 10 cms
44. Which of the following case is not true for a concave lens to find its image.





45. Which of the following phenomenon is responsible for the twinkling of a star ?

- (A) Atmospheric reflection       (B) Atmospheric refraction  
 (C) Reflection      (D) Total internal reflection

46. Match the following :

Column-A	Column-B
(1) Hypermetropia	(a) bifocal lens
(2) Catarac	(b) concave lens
(3) Presbyopia	(c) convex lens
(4) Myopia	(d) surgery

- (A) (1 - a), (2 - b), (3 - c), (4 - d)      (B) (1 - a), (2 - b), (3 - d), (4 - c)  
 (C) (1 - b), (2 - d), (3 - c), (4 - a)       (D) (1 - c), (2 - d), (3 - a), (4 - b)

47. Due to which effect of light is tyndall effect resulted ?

- (A) Reflection       (B) Scattering      (C) Refraction      (D) Dispersion

48. The amount of 2A electric current is passed for 1 'minute through a conducting wire. How much total electric charge will pass through this wire.

- (A) 2 C      (B) 60 C      (C) 30 C      (D) 120 C

49. Which of the following is true for Ohms law

- (A) As current increases resistance increases  
 (B) As voltage increases resistance increases  
 (C)  $V \rightarrow I$  is a linear graph  
 (D) As. resistance increases the current increases

50. What will be the direction of magnetic force by an electrified wire when placed in magnetic field.

- (A) Along magnetic field       (B) Perpendicular to magnetic -field  
 (C) along electric current      (D) opposite to magnetic field

□ □ □