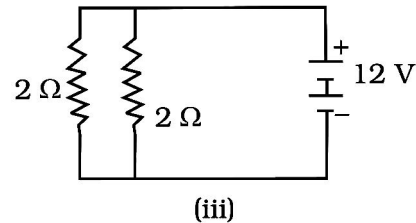
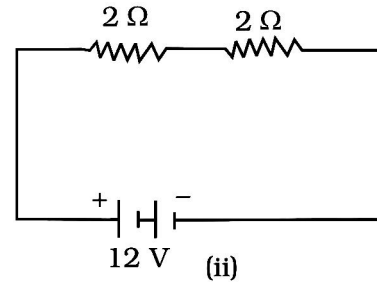
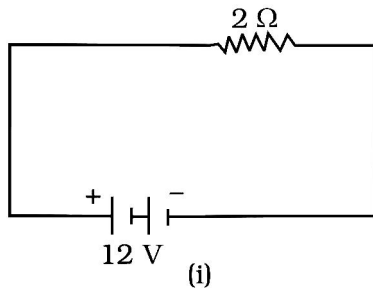


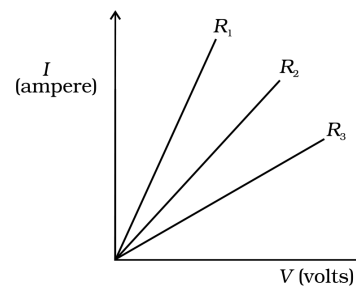
**SKD TALLENT SEARCH EXAM
(SAMPLE PAPER) - CLASS-X**

PHYSICS

01. A child is standing in front of a magic mirror. She finds the image of her head bigger, the middle portion of her body of the same size and that of the legs smaller. The following is the order of combinations for the magic mirror from the top.
- (1) Plane, convex and concave
 - (2) Convex, concave and plane
 - (3) Concave, plane and convex
 - (4) Convex, plane and concave
02. A 10 mm long awl pin is placed vertically in front of a concave mirror. A 5 mm long image of the awl pin is formed at 30 cm in front of the mirror. The focal length of this mirror is
- (1) – 30 cm
 - (2) – 20 cm
 - (3) – 40 cm
 - (4) – 60 cm
03. A current of 1 A is drawn by a filament of an electric bulb. Number of electrons passing through a cross section of the filament in 16 seconds would be roughly
- (1) 10^{20}
 - (2) 10^{16}
 - (3) 10^{18}
 - (4) 10^{23}
04. In the following circuits, heat produced in the resistor or combination of resistors connected to a 12 V battery will be



- (1) same in all the cases
 - (2) minimum in case (i)
 - (3) maximum in case (ii)
 - (4) maximum in case (iii)
05. A student carries out an experiment and plots the V-I graph of three samples of nichrome wire with resistances R_1 , R_2 and R_3 respectively (Figure). Which of the following is true?



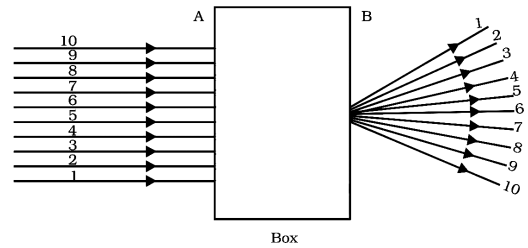
ROUGH WORK

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- (1) $R_1 = R_2 = R_3$ (2) $R_1 > R_2 > R_3$
 (3) $R_3 > R_2 > R_1$ (4) $R_2 > R_3 > R_1$

06. A cylindrical conductor of length ℓ and uniform area of cross section A has resistance R. Another conductor of length 2ℓ and resistance R of the same material has area of cross section

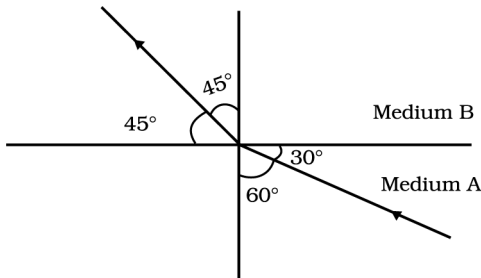
- (1) $A/2$ (2) $3A/2$ (3) $2A$ (4) $3A$



07. In an electrical circuit two resistors of $2\ \Omega$ and $4\ \Omega$ respectively are connected in series to a 6 V battery. The heat dissipated by the $4\ \Omega$ resistor in 5 s will be

- (1) 5 J (2) 10 J (3) 20 J (4) 30 J

08. Figure shows a ray of light as it travels from medium A to medium B. Refractive index of the medium B relative to medium A is



- (1) $\frac{\sqrt{3}}{\sqrt{2}}$ (2) $\frac{\sqrt{2}}{\sqrt{3}}$
 (3) $\frac{1}{\sqrt{2}}$ (4) $\sqrt{2}$

09. An electric kettle consumes 1 kW of electric power when operated at 220 V. A fuse wire of what rating must be used for it?

- (1) 1 A (2) 2 A
 (3) 4 A (4) 5 A

10. A beam of light is incident through the holes on side A and emerges out of the holes on the other face of the box as shown in the Figure. Which of the following could be inside the box?

- (1) Concave lens
 (2) Rectangular glass slab
 (3) Prism
 (4) Convex lens

CHEMISTRY

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01. The first ionisation energies of Li, Be, B and C are in the order:

- (1) $Li > Be < B < C$ (2) $Li < Be > B < C$
 (3) $Li > Be > B > C$ (4) $Li < Be > B > C$

02. An element with atomic number '32' belongs to

- (1) 4th period, VIA group
 (2) 3rd period, IVA group
 (3) 4th period, IVA group
 (4) 5th period, VA group

03. Among the following molecules H-bond is present in

- (1) NH_3 (2) PH_3
 (3) H_2S (4) CH_4

04. Which of the following electron dot structure is correct?

- (1) $\begin{array}{c} H \\ \times \\ \cdot \\ N \cdot \times H \\ \cdot \\ \times \\ H \end{array}$ (2) $\begin{array}{c} H \\ \times \\ \cdot \\ : N \cdot \times H \\ \cdot \\ \times \\ H \end{array}$ (3) $\begin{array}{c} H \\ \times \\ \cdot \\ \cdot N \cdot \times H \\ \cdot \\ \times \\ H \end{array}$
 (4) None of the above

ROUGH WORK

05. The basicity of acetic acid is the same as the basicity of _____.
 (1) HNO_3 (2) H_2SO_4
 (3) H_3PO_4 (4) H_2CO_3
06. Which of the following pH values at 25°C corresponds to the strongest acid?
 (1) 2 (2) 4
 (3) 6 (4) 8
07. The electron gain enthalpy of halogens are in the following order:
 (1) $\text{F} > \text{Cl} > \text{Br} > \text{I}$ (2) $\text{Cl} > \text{F} > \text{Br} > \text{I}$
 (3) $\text{F} < \text{Cl} < \text{Br} < \text{I}$ (4) None of the above
08. The IUPAC name of $\text{CH}_3\text{OC}_2\text{H}_5$ is-
 (1) Ethyl methylether
 (2) Methylethyl ether
 (3) Methoxyethane
 (4) Ethoxymethane
09. Following compounds belong to alkene homologous series.
 (1) C_2H_4 , C_3H_6 (2) C_2H_4 , C_2H_6
 (3) C_2H_2 , C_3H_4 (4) None of the above
10. Electrolysis of aqueous CuSO_4 with inert electrodes gives _____.
 (1) Cu at cathode, anode gets dissolved
 (2) Cu at cathode, O_2 at anode
 (3) O_2 at anode, H_2 at cathode
 (4) O_2 at anode, cathode gets dissolved
03. Lungs always contain residual volume of air so that-
 (1) There is sufficient time for O_2 to be absorbed and for the CO_2 to be released
 (2) There is sufficient time for CO_2 to be absorbed and for the O_2 to be released
 (3) There is sufficient time for SO_2 to be absorbed and for the CO_2 to be released
 (4) There is sufficient time for CO_2 to be absorbed and for the SO_2 to be released
04. For a healthy society-
 (1) Prenatal sex determination is must
 (2) Female - male sex ratio must be maintained
 (3) Abortion of female foetus should be performed
 (4) Population size should be very explosive
05. Find the incorrect statement?
 (1) When we breath in we lift our ribs and flatten our diaphragm
 (2) In human being the respiratory pigment is haemoglobin
 (3) Carbon-dioxide is less soluble in water than oxygen
 (4) Alveoli are balloon like structure in lungs
06. Lymph is similar to plasma of blood but it is-
 (A) Yellow coloured (B) Colourless
 (C) Protein less (D) More protein
 (1) All are correct (2) Only (B) and (D)
 (3) Only (B) and (C) (4) Only (C) and (D)
07. Normally, in a healthy adult, the initial filtrate in the kidneys per day is about-
 (1) 1 litre (2) 125 litre
 (3) 180 litre (4) 25 litre
08. The sperm formed in the testes are delivered through the
 (1) Seminal vesicle (2) Epididymus
 (3) Vas deferens (4) Prostate
09. An elastic bag like structure in the female reproductive system is
 (1) Cervix (2) Falopian tube
 (3) Uterus (4) Ovaries

Biology

01. Find the correct statement?
 (1) Bile is formed in gall bladder
 (2) Bile is stored in gall bladder
 (3) Gastric gland secretes salivary amylase
 (4) Gastraltic movement occurs all among the gut
02. Fats are present in small intestine in the forms of-
 (1) Larger globules (2) Smaller globules
 (3) Pellet form (4) Paste form

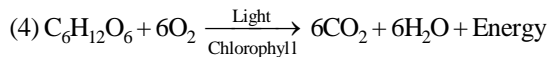
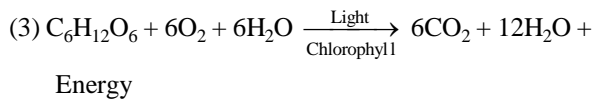
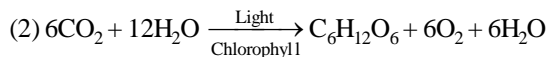
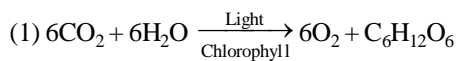
ROUGH WORK

10. A disc which is embedded in the uterine wall is-
 (1) Embryo (2) Zygote
 (3) Placenta (4) Villi
11. Which of the following is responsible for the transport of water and minerals from roots to stems, leaves, flowers and fruits in rooted plants?
 (1) Xylem (2) Phloem
 (3) Cortex (4) Both (1) and (2)

12. In plants; which of the following are translocated through phloem?
 (1) Hormones (2) Amino acids
 (3) Sugars (4) All of these

13. Most of the minerals present in soil can enter plants through.....
 (1) leaves (2) root hair
 (3) shoots (4) phloem

14. Which one is the correct reaction of photosynthesis?



15. Why are dark reactions called so?
 (1) They occur in darkness
 (2) They are not light dependent
 (3) They are not directly light driven
 (4) Both (1) and (2)

16. Glycolysis take place in
 (1) all living cells (2) eukaryotic cells only
 (3) prokaryotic cells only (4) None of the above

17. Net gain of ATP from one molecule of glucose in glycolysis is
 (1) 3 (2) 4 (3) 5 (4) 2

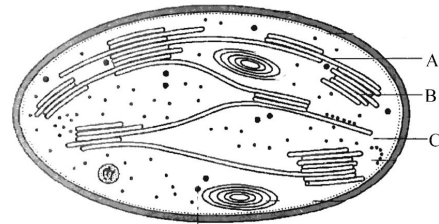
18. Match the following columns.

	Column-I		Column-II
A.	Glycolysis	1.	Inner mitochondrial membrane
B.	TCA cycle	2.	Mitochondrial matrix
C.	ETS	3.	Cytoplasm

- (1) A-3; B-1; C-2 (2) A-3; B-2; C-1
 (3) A-1; B-2; C-3 (4) A-2; B-1; C-3

19. The enzyme RuBisCO is found in
 (1) chloroplast (2) mitochondria
 (3) cytoplasm (4) nucleus

20. Identify A, B and C in given figure.



- (1) A-Stroma wall; B-Grana; C-Stroma
 (2) A-Stroma lamella; B-Grana; C-Stroma
 (3) A-Stroma lamella; B-Stroma; C-Grana
 (4) A-Stroma grain; B-Stroma; C-Grana

ROUGH WORK