

WHIZ SEARCH (SAMPLE PAPER)

CLASS – 10th [MEDICAL]

Important Instructions:

- This paper contains 45 questions among 4 Sections (Physics, Chemistry, Biology and Mental ability & Reasoning).
- All questions are compulsory.
- Sections (Physics, Chemistry and Biology) contains 10 questions each.
- Section (Mental ability & Reasoning) contains 15 questions only.
- Each question is allotted **4 marks for correct response**.
- **1 mark will be deducted** for marking incorrect or multiple responses.
- No deduction will be made from total marks for unattempted questions.
- For each question, there is **only 1 correct** response.

#SECTION# PHYSICS
#PART# SECTION (Maximum Marks: 40)

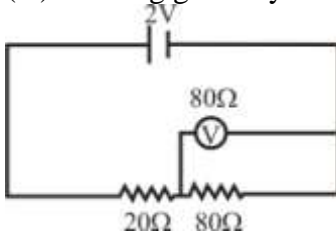
(1.) A conductor of resistance 8Ω is bent in the form of a circle. What will be the resistance between two points on any diameter of the circle?

- (a.) 1Ω
- (b.) 2Ω
- (c.) 8Ω
- (d.) 16Ω

Ans: B

Exp:

(2.) Reading given by voltmeter for given circuit is ,



- (a.) 0.80V
- (b.) 1.33V
- (c.) 1.60V
- (d.) 2.00V

Ans: C

Exp:

(3.) An electron moving is at 10^7 m/s in a uniform magnetic field of 2×10^{-4} Tesla. Find the magnetic force acting on the electron

- (a.) 1.6×10^{-16} N
- (b.) 3.2×10^{-16} N
- (c.) 6.4×10^{-16} N
- (d.) Zero

Ans: B

Exp:

(4.) An electron of mass m_e , initially at rest, moves through a certain distance in a uniform electric field in time t_1 . A proton of mass m_p , also initially at rest, takes time t_2 to move through an equal distance in this uniform electric field. Neglecting the effect of gravity, the ratio $\frac{t_2}{t_1}$ is nearly equal to :

- (a.) 1
- (b.) $\left(\frac{m_p}{m_e}\right)^{\frac{1}{2}}$

(c.) $\left(\frac{m_e}{m_p}\right)^{\frac{1}{2}}$

(d.) 1836

Ans: B

Exp:

(5.) One kilowatt is equal to _____ horse power.

(a.) 1.34

(b.) 1.32

(c.) 1.28

(d.) 1.38

Ans: A

Exp:

(6.) Arrange the following steps to verify the Ohm's law in proper sequence.

(a) Switch on the electric circuit.

(b) Move the position of the slider of the rheostat and note down the ammeter and voltmeter readings.

(c) Connect ammeter, key, battery, rheostat and resistor in series by using conducting wires.

(d) Note down the Ammeter and voltmeter reading.

(e) Connect a voltmeter across the resistor.

(f) Determine the ratio of voltmeter reading and ammeter reading in each case.

(g) Note that the ratio of voltmeter and ammeter reading are equal in each case.

(a.) c a e d b f g

(b.) c e a d b f g

(c.) a b e c d f g

(d.) b c e d f h g

Ans: B

Exp:

(7.) In an AC generator, maximum number of lines of force pass through the coil when the angle between the plane of coil and lines of force is _____.

(a.) 0°

(b.) 60°

(c.) 30°

(d.) 90°

Ans: D

Exp:

(8.) _____ is an example of isobars.

(a.) ${}_{14}\text{Si}^{31}$, ${}_{15}\text{P}^{32}$

(b.) ${}_{6}\text{C}^{13}$, ${}_{7}\text{N}^{13}$

- (c.) ${}^7\text{N}^{14}$, ${}^7\text{N}^{15}$
(d.) ${}^{16}\text{C}^{32}$, ${}^{15}\text{Pb}^{13}$

Ans: B

Exp:

(9.) _____ reaction takes place in the sun.

- (a.) nuclear fission
(b.) nuclear fusion
(c.) Chemical
(d.) both (a) and (b)

Ans: B

Exp:

(10.) Solar energy provides

- (a.) wind energy
(b.) light energy
(c.) heat energy
(d.) All the above

Ans: D

Exp:

#SECTION# CHEMISTRY
#PART# SECTION (Maximum Marks: 40)

(11.) From the list of elements given below which of the following option contains three metalloids?

- (a.) Si, Ge, Zr, Te
(b.) Si, P, S, Cl
(c.) As, Bi, Br, Kr
(d.) Po, Co, Fe, Xe

Ans: A

Exp:

(12.) A student set-up an apparatus for finding the melting point of ice. When half the ice melted, the temperature shown by thermometer is :

- (a.) more than 0°C
(b.) less than 0°C
(c.) zero degree celsius
(d.) 100°C

Ans: C

Exp:

(13.) What is aqua regia?

- (a.) 1 : 2 Mixture of Chromic acid and sulphuric acid
(b.) 1 : 3 Mixture of Conc. HCl and Conc. HNO₃
(c.) 1 : 3 Mixture of Conc. HNO₃ and Conc. HCl
(d.) 1 : 1 Mixture of Conc. H₂SO₄ and Conc. HCl

Ans: C

Exp:

(14.) The shape of Graphite is :

- (a.) Square planar
(b.) Cubical
(c.) Face centred cubic
(d.) Hexagonal

Ans: D

Exp:

(15.) In given compounds. Which is present in red ant?

- (a.) HCOOH
(b.) CH₃COOH
(c.) CH₃CH₂O
(d.) CH₄

Ans: A

Exp:

(16.) In Benzene number of covalent bonds present:

- (a.) 18
(b.) 12
(c.) 15
(d.) 6

Ans: C

Exp:

(17.) The IUPAC name of oxalic acid is :

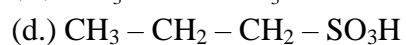
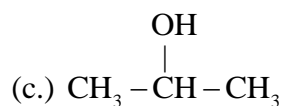
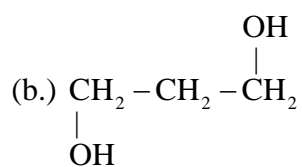
- (a.) Ethanoic acid
(b.) Ethanol
(c.) Ethanediol
(d.) Ethanedioic acid

Ans: D

Exp:

(18.) $\text{CH}_3 - \text{CH} = \text{CH}_2 \xrightarrow[\text{dil H}_2\text{SO}_4]{\text{H}_2\text{O}}$ A; A is.

- (a.) CH₃ - CH₂ - CH₂ - OH



Ans: C

Exp:

(19.) Marsh gas is :

(a.) CH_4

(b.) C_2H_6

(c.) CHCl_3

(d.) NH_3

Ans: A

Exp:

(20.) In given gases which one is most basic ?

(a.) PH_3

(b.) CO_2

(c.) SO_3

(d.) NH_3

Ans: D

Exp:

#SECTION# BIOLOGY

#PART# SECTION (Maximum Marks: 40)

(21.) For photosynthesis, the green plants need?

(a.) Chlorophyll

(b.) CO_2 and water

(c.) Light

(d.) Water

Ans: B

Exp:

(22.) Nephron is functional unit of

(a.) Lungs

(b.) Brain

(c.) Kidney

(d.) Heart

Ans: C

Exp:

(23.) A two-layered sac surrounding the heart is called

- (a.) pericardium
- (b.) Perichondrium
- (c.) Periosteum
- (d.) Pleura

Ans: A

Exp:

(24.) Which of the following is a plant hormone?

- (a.) Insulin
- (b.) Thyroxine
- (c.) Oestrogen
- (d.) Cytokinin

Ans: D

Exp:

(25.) Archaeopteryx was a link between

- (a.) Reptiles and mammals
- (b.) Birds and mammals
- (c.) Reptiles and birds
- (d.) Amphibians and reptiles

Ans: C

Exp:

(26.) Chlorophyll is present

- (a.) In the grana of chloroplasts
- (b.) On the surface of chloroplasts
- (c.) In the stroma
- (d.) Dispersed throughout the chloroplasts

Ans: A

Exp:

(27.) Dentine is the

- (a.) Softest part of the tooth
- (b.) Hardest part of the tooth
- (c.) Part of the tooth between enamel and pulp
- (d.) Bone

Ans: C

Exp:

(28.) Glucose gets converted into pyruvate in

- (a.) Mitochondria
- (b.) Muscle cells
- (c.) Cytoplasm
- (d.) Yeast

Ans: C

Exp:

(29.) The trachea is prevented from collapsing by

- (a.) Complete cartilaginous rings
- (b.) Incomplete cartilaginous rings
- (c.) Bony rings
- (d.) Chitinous rings

Ans: B

Exp:

(30.) Which of the following is not a ductless gland?

- (a.) Adrenal
- (b.) Thyroid
- (c.) Pituitary
- (d.) Liver

Ans: D

Exp:

#SECTION# MENTAL ABILITY & REASONING

#PART# SECTION 1 (Maximum Marks: 60)

(31.) If $>$ denote $+$, $<$ denotes $-$, \div denotes \div , \wedge denotes \times , $-$ denotes $=$, \times denotes $>$ and $=$ denotes $<$, choose the correct statement in the question given below.

- (a.) $14 > 18 + 9 = 16 + 4 > 1$
- (b.) $4 > 3 \wedge 8 < 1 - 6 + 2 > 24$
- (c.) $3 < 6 \wedge 4 > 25 = 8 + 4 > 1$
- (d.) $12 > 9 \wedge 3 < 6 \times 25 + 5 > 6$

Ans: B

Exp:

(32.) Study the following information to answer the given questions.

- (i) Eight friends A, B, C, D, E, F, G and H are seated in a circle facing centre.
- (ii) D is between B and G and F is between A and H.
- (iii) E is second to the right of A.

Which of the following is A's position ?

- (a.) left of F
- (b.) Right of F
- (c.) Between E and F

(d.) can't be determined

Ans: B

Exp:

(33.) Study the following information to answer the given questions.

(i) Eight friends A, B, C, D, E, F, G and H are seated in a circle facing centre.

(ii) D is between B and G and F is between A and H.

(iii) E is second to the right of A.

Which of the following is C's position ?

(a.) Between E and A

(b.) Between G and E

(c.) Second to the left of B

(d.) Can't be determined

Ans: A

Exp:

(34.) Pointing to a man in a photograph, Anita said "His brother's father is the only son of my grandfather" How is Anita related to the man in the photograph ?

(a.) Mother

(b.) Aunt

(c.) Sister

(d.) Daughter

Ans: C

Exp:

(35.) From point P, Akshay starts walking towards East. After walking 30 metres, he turns to his right and walks 10 metres. He then turns to his right and walks for 30 metres. He again turns to his right and walks 30 metres. How far is he from Point P and in which direction ?

(a.) Point P itself

(b.) 10 metres North

(c.) 20 metres West

(d.) 20 metres North

Ans: D

Exp:

(36.) **Bank** is related to **Money** in the same way **Transport** is related to.

(a.) Goods

(b.) Road

(c.) Terrace

(d.) Floor

Ans: A

Exp:

(37.) In this given questions, three out of the four alternatives are same in a certain way and so form a group. Find the odd one that does not belong to the group.

- (a.) Teeth
- (b.) Tongue
- (c.) Palate
- (d.) Chin

Ans: D

Exp:

(38.) If the alphabets were written in the reverse order, which letter will be the fifth letter to the right of the fourteenth letter from the left.

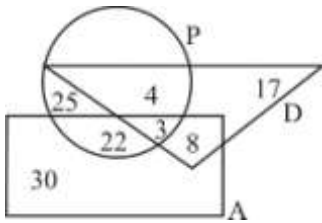
- (a.) R
- (b.) I
- (c.) S
- (d.) H

Ans: A

Exp:

(39.) Study the following figure carefully and answer the questions:

The triangle represented doctors. The circle represents players and the rectangle represents artists.



How many doctors are both players and artists?

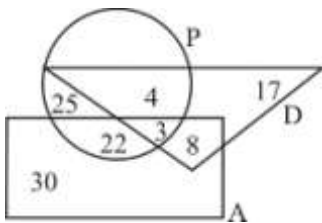
- (a.) 6
- (b.) 8
- (c.) 4
- (d.) 3

Ans: D

Exp:

(40.) Study the following figure carefully and answer the questions:

The triangle represented doctors. The circle represents players and the rectangle represents artists.



How many artists are players?

- (a.) 30
- (b.) 29
- (c.) 25

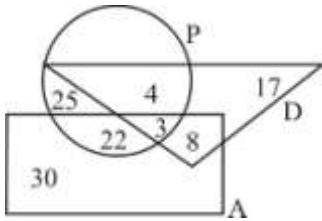
(d.) 17

Ans: C

Exp:

(41.) Study the following figure carefully and answer the questions:

The triangle represented doctors. The circle represents players and the rectangle represents artists.



How many artists are neither players nor doctors?

(a.) 29

(b.) 30

(c.) 22

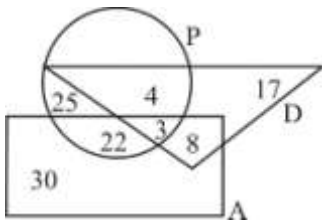
(d.) 8

Ans: B

Exp:

(42.) Study the following figure carefully and answer the questions :

The triangle represented doctors. The circle represents players and the rectangle represents artists.



How many doctors are neither players nor artists?

(a.) 17

(b.) 30

(c.) 8

(d.) 19

Ans: A

Exp:

(43.) Karan was born on Saturday 22nd March 1982. On what day of the week was he 14 years 7 months and 8 days of age ?

(a.) Sunday

(b.) Tuesday

(c.) Wednesday

(d.) Monday

Ans: D

Exp:

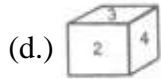
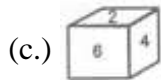
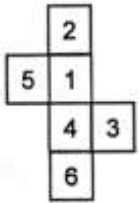
(44.) How many times are the hands of a clock coincide in a day ?

- (a.) 10
- (b.) 11
- (c.) 12
- (d.) 22

Ans: D

Exp:

(45.) Which of the following dices is identical to the unfolded figure as shown here ?



Ans: A

Exp: