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ACADEMIC SESSION 2023-25

Sample Test Paper

ResoNET-2022-23

Resonance National Entrance Test (Admission Cum Scholarship)

Target : NEET 2025

Course Name SAKSHAM | **Class : XI** | **Course Code** MA

Duration : 90 Min. **Max. Marks : 200**

Pattern : Single Option Correct (+4, -1) Total No. of Q. 50 (Physics : 10 Question, Chemistry : 10 Question, Mathematics : 10 Question, Biology : 20)

Resonet Syllabus for 10th to 11th moving students

PHYSICS : **Ray optics :** reflection, plane and spherical mirror. Refraction , Lenses and prism. **Current electricity :** Ohms law, Resistivity, Combination of resistor, Ammeter, Voltmeter, heating effect of current. Magnetic effect of current. **Kinematics :** Motion on straight line, displacement and distance , average velocity. Acceleration. graphs for rectilinear motion. Motion under gravity. **Heat :** Temperature, its various units and their relationship. Specific heat capacity. Latent heat of fusion and vaporization, principle of calorimetry.

CHEMISTRY : Matter, Mole concept, Periodic classification, Acid base and salt, Metal and non metals, (Metallurgy) Carbon and it's compounds, Chemical reaction and equations, Atoms and molecules

MATHEMATICS : Real numbers and polynomials ,Quadratic Equations ,Trigonometry ,Arithmetic progression.Geometry.

BIOLOGY : Animal diversity / classification, Plant diversity / classification, Reproduction (Plant & Animal) Heredity / Genetics, Tissue (plant & animal), Transport in plants & Animals, Co-ordination in human being (nervous system, endocrine system)

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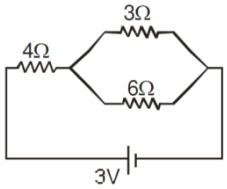
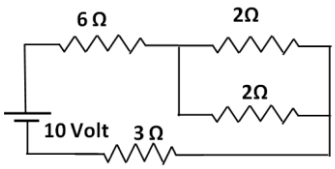
Section-I (Physics)

1. Find current supplied by the 3 Volt cell in the circuit



(A) 1 A (B) 3 A (C) 0.5 A (D) 4/3 A

2. For the circuit shown in fig find power developed in 3 Ω resistor

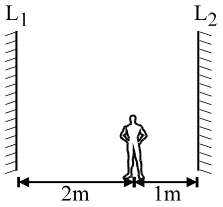


(A) 100/3 W (B) 30 W (C) 3W (D) 5W

3. An object of height 2cm is placed perpendicular to principal axis at distance 30 cm from pole of a convex lens(f=20 cm) then its image will be

(A) real and of height 4 cm (B) real and of height 1 cm
(C) Virtual and of height 4 cm (D) Virtual and of height 1 cm

4. Two mirrors labeled L_1 for left mirror and L_2 for right mirror in the figure are parallel to each other and 3.0 m apart. A person standing 1.0 m from the right mirror (L_2) looks into this mirror and sees a series of images. The second nearest image seen in the right mirror is situated at a distance:



(A) 2.0 m from the person (B) 4.0 m from the person
(C) 6.0 m from the person (D) 8.0 m from the person

5. A particle travels from point A to B in a straight line with uniform speed of 60 km/hr. It immediately returns back from B to A with uniform speed of 40 km/hr. Find average velocity and average speed of particle over the whole journey.

(A) 0, 48 km/hr (B) 0, 50 km/hr (C) 48 km/hr, 0 (D) 20 km/hr, 50 km/hr.

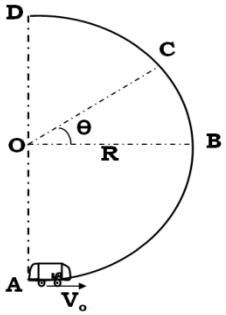
6. When a ball is thrown up vertically with velocity V_0, it reaches a maximum height of ' h '. If one wishes to triple the maximum height then the ball should be thrown with velocity

(A)$2V_0$ (B) $3\ V_0$ (C) $\sqrt{3}\ V_0$ (D) V_0

7. A car starts moving with acceleration 2 m/s^2 for 10 sec then move with constant velocity find displacement in 1^{st} 20 sec

(A) 500 m (B) 400 m (C) 300 m (D)350 m

8. A car is moving on a semicircular track ABCD of radius R with constant speed V_o as shown. Find magnitude of displacement for motion A to B



(A)2R (B) 3 R (C) $\sqrt{2}$ R (D) R

9. Temperature of a body is 37 ^{o} C then its temperature in Kelvin will be
(A) 300 (B) 340 (C) 310 (D) 350

10. A beaker contains 2kg water at 20 ^{o} C and another beaker contains 3 kg water at 80^{o}C. if the two are mixed together then what will be temperature of the mixture.
(A) 50^{o} (B) 40^{o} (C) 56^{o} (D)65^{o}

Section-II (Chemistry)

1. At NTP 1.0 g hydrogen has volume in litre:
(A) 1.12 (B) 22.4 (C)2.24 (D)11.2

2. 19.7 kg of gold was recovered from a smuggler. The atoms of gold recovered are: (Au = 197)
(A) 10 (B) 6.02×10^{23} (C) 6.02×10^{24} (D) 6.02×10^{25}

3. Which of the following element is more electro positive ?
(A) Br (B) F (C) Cl (D) I

4. Froth floatation process is based on
(A) specific gravity of the ore particle (B) magnetic properties of the ore particle
(C) wetting properties of the ore particle (D) electrical property o the ore particle

5. Which of the given elemets A, B, C, D and E with atomic number 2, 3, 7, 10 and 30 respectively belong to the same period.
(A) A, B, C (B) B, C, D (C) A, D, E (D) B, D, E

6. Which of the following is smallest in size
(A) O^{-2} (B) C^{-4} (C) F^{-1} (D) N^{-3}

7 . A polar covalent compound is:
(A)Methane (B) Ammonia (C)Nitrogen (D)Chlorine

8. An aqueous compound which turns colourless phenolphthale in to pink:
(A) Ammonium hydroxide (B)Nitric acid (C)Anhydrous calcium chloride (D)Sulphuric acid

9. The main components of bronze are:
(A) Copper and tin (B) Copper and iron (C) Copper and lead (D) Copper and zinc

10. An acid which has two replaceable hydrogen ions:

(A) Acetic acid (B)Hydrochloric acid (C)Phosphoric acid (D)Carbonic acid

Section-III (Math)

1. $\frac{3}{5}+\frac{5}{4}=...?$

(A) $\frac{8}{9}$ (B) $\frac{37}{9}$ (C) $\frac{39}{20}$ (D) $\frac{37}{20}$

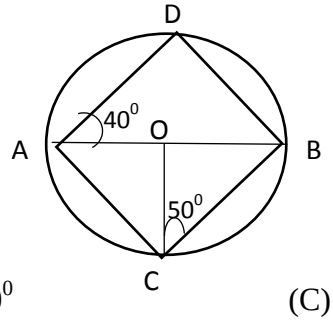
2. If $3x+2y=7 \& 4x-y=2$ then find value of $(x+2y)=?$

(A) 2 (B) 4 (C) 7 (D) 5

3. $\frac{a^3+b^3}{a+b}=?$

(A) a^2-b^2 (B) a^2+b^2 (C) a^2+ab+b^2 (D) a^2-ab+b^2

4. In the diagram AB is a diameter, 'O' is the center of the circle and $\angle OCB = 50°$, then find $\angle DBC$.



(A) 80^0 (B) 100^0 (C) 120^0 (D) 140^0

5. Match the following: Object has radius R

P	Volume of a cylinder of height 3R	I.	$2\pi R^2$
Q	Volume of a sphere	II.	$\frac{4\pi}{3}R^3$
		III	$3\pi R^3$
R	Outer surface area of a sphere	IV.	$2\pi R^3$
		V	$4\pi R^2$

(A) P-II,Q-I,R-III (B) P-III,Q-II,R-V (C) P-III,Q-II,R-IV (D) P-IV,Q-II,R-I

6. The greater between $\sqrt{19}-\sqrt{14}$ & $\sqrt{12}-\sqrt{7}$

(A) $\sqrt{19}-\sqrt{14}$ (B) $\sqrt{12}-\sqrt{7}$ (C) Both are equal (D) Can't say.

7. If $cosA+cos^2A=1$ then the value of sin^2A+sin^4A is

(A) 1 (B) $\frac{1}{2}$ (C) 2 (D) 3

8. If $(2x+1)>5$ and $(x-1)<9$ then which of the following could not be value of x

(A) 1 (B) 4 (C) 7 (D) 8

9. The quadratic equation $ax^2 + bx + c = 0$ will have real and distinct roots if
(A) $b^2 - 4ac < 0$ (B) $b^2 - 4ac > 0$ (C) $b^2 - 4ac = 0$ (D) all of these.

10. The first term of an A.P is 5, the last term is 45 and the sum is 400. Then the fourth term of A.P is
(A) 13 (B) 11 (C) 15 (D) 14.

Section-IV (Biology)

1. Special feature of dividing cells is –
(A) large lacuna (B) thick cell walls
(C) dense cytoplasm devoid of lacuna (D) large intracellular spaces

2. The muscle which work through out life without undergoing fatigue is –
(A) striated muscle (B) nonstriated muscle (C) cardiac muscle (D) all

3. Which hormone would be secreted when a mad dog is running after you :
(A)Testosterone (B) Adrenaline (C) Thyroxine (D) Thymosin

4. The largest part of brain is
(A) Corpora quadrigemina (B) Medulla oblongata (C) Cerebellum (D) Cerebrum

5. Seminiferous tubules are composed of
(A) spermatogonia (B)glandular epithelium(C) sensory epithelium(D) germinal epithelia

6. The roots of some plants can give rise to new plants. Select correct one from the following –
(A) Potato (B) Bryophyllum (C) Sweet potato (D) Turmeric

7. Locomotion by tube feet is found in which phylum
(A) Mollusca (B) Echinodermata (C) Coelenterata (D) Annelida

8. Flowering plants are included under
(A) cryptogams (B) phanerogams (C) bryophytes (D) pteridophytes

9. The phenomenon of uptake of water at the expense of energy by the cell and usually against the osmotic gradient is known as :
(A) active absorption (B) passive absorption (C) osmosis (D) diffusion

10. A recessive trait in garden pea is :
(A) Wrinkled seeds (B) Tall stem (C) Round seeds (D) Coloured seed coat

11. A girl has blood group A and her brother has blood group B. Which combination of genotypes can not belong to their parents
(A) I^AI^B, I^AI^A (B) I^AI^B, I^AI^B (C) I^OI^O, I^AI^B (D) I^BI^O, I^AI^O

12. Where is pituitary gland located in the body ?
(A)On the sides of trachea (B) Near the Heart (C) In the brain (D) Above the kidneys

13. Statement 1 : We should plant eucalyptus trees along all sewage ponds.

Statement 2 : Eucalyptus trees absorb all surplus waste water rapidly and release pure water vapour into the atmosphere.

(A)Statement 1 is true but Statement 2 is false

(B)Both statement 1 and 2 are true and statement 2 is the correct explanation of statement 1

(C)Both statement 1 and 2 are true but statement 2 is the not correct explanation of statement 1

(D) Both statements 1 and 2 are false

14. The sensation of sight in human brain is perceived by

(A)Optic lobe (B)Occipital lobe (C)Frontal lobe (D)Parietal lobes

15. The embryo sac of a typical dicot at the time of fertilization is

A) 8 Celled (B) 6 Celled (C)7 Celled (D) 5 Celled

16. In snapdragon, when red flowers crossed with white flowers then ratio of pink flowers and white flowers in the F_2 progeny is

(A)10% red (B)red & white in 3:1 ratio

(C)pink and white in 1:1 ratio (D)pink and white 2:1 ratio

17. Which type of white blood cells are concerned with the release of histamine and the natural anticoagulant heparin?

(A) Neutrophils (B) Eosinophils (C) Basophils (D) Monocyte

18. A touch on the right hand stimulates neurons in

(A) Left somatic sensory area (B) Right somatic sensory area

(C) Temporal area (D) Both (A) and (B)

19. In Whittaker's classification, unicellular organisms are grouped under

(A) Protista (B) Porifera (C) fungi (D) protozoa

20. Natural parthenogenesis occurs in

(A) Honey bee (B) frog (C) Humans (D) rabbit

Answer key: Physics

1.C	2.C	3.A	4.B	5.A	6.C	7.C	8.C	9. A	10.C

Answer key: Chemistry

1. D.	2.D.	3.D.	4.C	5.B	6.C	7.B	8.A	9.A	10.D

Answer key: Maths

1.D	2.D	3.D	4.B	5.B	6.B	7.A	8.A	9.B	10.A

Answer key: Biology

1. C	2.C	3.B	4.D	5.D	6.C	7.B	8.B	9.A	10.A
11.A	12.C	13.B	14.A	15.C	16.D	17.C	18.A	19.A.	20.A