



UNITED
UNIVERSITY

BSc. Agriculture (Hons.) (Biology) ADMISSION TEST

INSTRUCTIONS

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PHYSICS	10 Questions	(10 X 1 = 10)
BIOLOGY	10 Questions	(10 X 1 = 10)
CHEMISTRY	10 Questions	(10 X 1 = 10)
ENGLISH	10 Questions	(10 X 1 = 10)
APTITUDE & REASONING	10 Questions	(10 X 1 = 10)

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MM- 50

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Details of the candidate

Name.....

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- 1. Which one of the following is the unit of electric field?**
(a) Coulomb
(b) Newton
(c) Volt
(d) N/C
- 2. In which of the following forms is the energy stored in a capacitor?**
(a) Charge
(b) Electric field
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(d) Potential
- 3. Which of the following shows that the earth behaves as a magnet?**
(a) Repulsion between like poles.
(b) Attraction between unlike poles
(c) Null points in the magnetic field of a bar magnet
(d) No existence of isolated magnetic poles
- 4. S.I. unit of flux is :**
(a) Ohm
(b) Weber
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(d) None
- 5. An iron core transformer with a turns ratio of 8: 1 has 120 V applied across the primary. The voltage across the**
(a) 15 V
(b) 120 V
(c) 180 V
(d) 960 V
- 6. Which of the following effects is not shown in alternating current?**
(a) Chemical effect
(b) Magnetic effect
(c) Heating current
(d) All of these
- 7. Which of the following cannot be polarized?**
(a) radio waves
(b) transverse waves
(c) sound waves
(d) X-rays
- 8. Protons and alpha particles have the same de-Broglie wavelength. What is same for both of them?**
(a) Energy
(b) Time period
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(d) Momentum
- 9. Natural radioactivity was discovered by:**
(a) Joliot
(b) Becquerel
(c) Pauli
(d) None of these
- 10. X-ray was discovered by :**
(a) Becquerel
(b) Marie curie
(c) Roentgen
(d) Van law

CHEMISTRY

1. The purest form of iron is

- (a) Wrought iron
- (b) steel
- (c) pig iron
- (d) nickel steel

2. Hydrogen bomb is based on the principle of

- (a) Nuclear fission
- (b) nuclear fusion
- (c) Natural radioactivity
- (d) artificial radioactivity

3. Which one of the following is non-crystalline or amorphous?

- (a) Diamond
- (b) Graphite
- (c) Glass
- (d) Common Salt

4. If 96500 coulomb electricity is passed through CuSO_4 solution, it will liberate

- (a) 63.5 gm of Cu
- (b) 31.76 gm of Cu
- (c) 96500 gm of Cu
- (d) 100 gm of Cu

5. SI unit of equivalent conductance

- (a) ohm/cm
- (b) Siemens m²/equivalent
- (c) Siemens/equivalent
- (d) Siemens m²/equivalent

6. Which of the following is NOT a compound?

- (a) Ammonia
- (b) Sodium chloride
- (c) Milk
- (d) Chalk

7. What is the molecular formula of Butyne?

- (a) C_3H_4
- (b) C_4H_6
- (c) C_2H_2
- (d) C_4H_{10}

8. Brass gets discolored in air because of the presence of which of the following gases in air?

- (a) Hydrogen sulphide
- (b) Oxygen
- (c) Nitrogen
- (d) Carbon dioxide

9. The formula of lithium nitride is:

- (a) Li_2N
- (b) LiN
- (c) Li_3N_2
- (d) Li_3N

10. Which of the following alcohols will give the most stable carbocation during dehydration?

- A) 2-methyl-1-propanol
- B) 1-Butanol
- C) 2-methyl-2-propanol
- D) 2-Butanol

BIOLOGY

1. The human heart is

- (a) Neurogenic heart
- (c) Pulsating heart

- (b) Myogenic heart
- (d) Ampullary heart

2. Animal without red blood cells

- (a) Frog
- (c) Earthworm

- (b) snake
- (d) Peacock

3. Who is known as father of Zoology?

- (a) Darwin
- (c) Lamarck

- b) Aristotle
- (d) Theophrastus

4. The energy released by 1 gram of glucose is:

- (a) 6 kcal
- (c) 4 kcal

- (b) 5 kcal
- (d) 3 kcal

5. Which one of the following phenomenon supports Darwin's concept of natural selection in organic evolution?

- (a) Development of transgenic animals
- (b) Production of 'Dolly the sheep' by cloning
- (c) Prevalence of pesticide resistant insects
- (d) Development of organs from 'Stem cells' for organ transplantation

6. Which of the following is the cancer of blood?

- (a) Sarcoma
- (c) Leukemia

- (b) Lymphoma
- (d) None of these

7. Which of the following divisions of plants does NOT have a well differentiated body?

- (a) Gymnosperms
- (c) Thallophytic

- (b) Bryophyte
- (d) Pteridophyta

8. The plant dye Henna imparts orange red color to skin and hairs due to its reaction with which of the following?

- (a) Protein and amino acids
- (c) Carbohydrates

- (b) Lipids
- (d) Amino acids

9. In Ozone Degradation which element acts as catalyst?

- (a) Chlorine
- (c) Oxygen

- (b) Fluorine
- (d) Potassium

10. Plant roots soil water is:

- (a) Cellular water
- (c) Humidity water

- (b) Surface water
- (d) Gravitational water

ENGLISH

FILL IN THE BLANKS

1. We have been in Sector: 8, Gandhinagar _____ 1997.

(a) For

(c) About

(b) from

(d) since

2. Our armed forces are _____ those of any other country in the world.

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4. All the winners _____ Prizes tomorrow.

(a) Will be given

(c) Will be giving

(b) will given

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ONE WORD SUBSTITUTION

5. A person living permanently in a certain place

(a) Resident

(c) Domicile

(b) Native

(d) Subject

6. A handwriting by which cannot be easily read

(a) Illegible

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SENTENCE IMPROVEMENT

Select the appropriate option to substitute the underline segment in give sentences

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(a) Hell bent on getting

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8. He sent a word to me that he would be coming late.

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Select the most appropriate meaning of IDIOMS

9. He is not worth his salt if fails at this juncture.

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10. To cry wolf

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QUANTITATIVE APTITUDE & REASONING

1. A train running at the speed of 60 km/hr crosses a pole in 9 seconds. What is the length of the train?

- (a) 120 meters (b) 324 meters
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2. If a person walks at 14 km/hr instead of 10 km/hr, he would have walked 20 km more. The actual distance travelled by him is:

- (a) 50 km (b) 70 km
(c) 56 km (d) 80 km

3. The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?

- (a) 8 Years (b) 10 Years
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4. Which of the following is the odd one from the given alternatives?

- (a) Driving (b) Swimming
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5. The cost price of a radio is Rs.1500 and it was sold for Rs.1230, find the loss %?

- (a) 18 % (b) 15%
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6. The number comes next in the series 12, 36, 109, 329, ... –

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7. Find missing number:

13	54	?
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8. If CAT is coded as PATC, JOY is coded as POYJ; similarly the word WING will be coded as –

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MATHMATICS

1. The equation $|x-2|+|x-9|=7$ has solution if

- (a) $x=2$
- (c) $x \geq 9$

- (b) $x=9$
- (d) $2 \leq x \leq 9$

2. The line $x+3y-2=0$ bisects the angle between a pair of straight lines of which one has the equation $x-7y+5=0$. The equation of the other line is

- (a) $3x+3y-1=0$
- (c) $5x+5y-3=0$

- (b) $x-3y+2=0$
- (d) $5x+5y+3=0$

3. If A and B are square matrices then $(AB)'$ =

- (a) $B'A'$
- (c) AB'

- (b) $A'B'$
- (d) $A'B'$

4. The set of points where the function f given by $f(x) = |2x - 1| \sin x$ is differentiable is

- (a) \mathbb{R}
- (c) $(0, \infty)$

- (b) $\mathbb{R} = \{\frac{1}{2}\}$
- (d) None of these

5. What type of a relation is $R = \{(1, 3), (4, 2), (2, 4), (2, 3), (3, 1)\}$ on the set $A = \{1, 2, 3, 4\}$

- (a) Reflexive
- (c) Symmetric

- (b) Transitive
- (d) None of these

6. Consider the binary operation $*$ on \mathbb{Q} defined by $x * y = 1 + 12x + xy, \forall x, y \in \mathbb{Q}$, then $2 * 3$ equals

- (a) 31
- (c) 43

- (b) 40
- (d) None of these

7. Simplified form of $\cos^{-1}(4x^3 - 3x)$

- (a) $3 \sin^{-1}x$
- (c) $\pi - 3 \sin^{-1}x$

- (b) $3 \cos^{-1}x$
- (d) None of these

8. A matrix $A = [a_{ij}]_{m \times n}$ is said to be symmetric if

- (a) $a_{ij} = 0$
- (c) $a_{ij} = a_{ji}$

- (b) $a_{ij} = a_{ji}$
- (d) $a_{ij} = 1$

9. If A, B are two events associated with same random experiment such that $P(a) = 0.4, P(b) = 0.8$ and $P(B/A) = 0.6$ then $P(A/B)$ is

- (a) 0.3
- (c) 0.5

- (b) 0.4
- (d) 0.6

10. The maximum value of the object function $Z = 5x + 10y$ subject to the constraints $x + 2y \leq 120, x + y \geq 60, x - 2y \geq 0, x \geq 0, y \geq 0$ is

- (a) 300
- (c) 400

- (b) 600
- (d) 800

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