

AFNS TEST 15-16 September 2025

Question: Which hormone regulates blood sugar levels?

Correct Answer: Insulin

Explanation: Insulin, secreted by pancreas, lowers blood sugar by facilitating glucose uptake into cells.

Related Question 1: Which hormone increases blood sugar level?

Correct Answer: Glucagon

Related Question 2: Which disease is caused by insulin deficiency?

Correct Answer: Diabetes mellitus



AFNS ACADEMIC NOTES

ARMED FORCES NURSING SERVICES



DISCLAIMER:

یہ نوٹس صرف تعلیمی مقاصد کے لیے تیار کیے گئے ہیں اور ان کا مواد مکمل طور پر ہماری محنت اور علم پر مبنی ہے۔ یہ ڈیمو نوٹس ہیں اور ہماری لیکچر سلائیڈز پر مبنی ہیں۔ ان نوٹس کو کسی بھی صورت میں نقل کرنا یا بغیر اجازت استعمال کرنا غیر قانونی اور غیر اخلاقی ہے۔ تمام حقوق محفوظ ہیں۔

BY:

MUHAMMAD FAIZAN (EX-AIRFORCE PERSONNEL)

EduSmart | The Best Coaching Academy

اگر آپ آرمی، نیوی یا ایئر فورس کی کسی بھی برانچ کے امتحان کی تیاری کرنا چاہتے ہیں تو ہم سے رابطہ کریں: 03066892208

To Join Classes Contact: 03066892208



EduSmart

AFNS TEST 15-16 September 2025

Question: Which particle inside the nucleus has no charge?

Correct Answer: Neutron

Explanation: Neutrons are neutral subatomic particles that stabilize the nucleus and prevent repulsion among protons.

Related Question 1: Who discovered the neutron?

Correct Answer: James Chadwick

Related Question 2: What is the charge of a proton?

Correct Answer: +1

AFNS TEST 15-16 September 2025

Question: Which gas is essential for photosynthesis?

Correct Answer: Carbon dioxide (CO₂)

Explanation: Plants take in CO₂ during photosynthesis and, using sunlight and chlorophyll, convert it into glucose and oxygen.

Related Question 1: Which pigment captures sunlight in photosynthesis?

Correct Answer: Chlorophyll

Related Question 2: Which gas is released during photosynthesis?

Correct Answer: Oxygen

AFNS TEST 15-16 September 2025

Question: Which law explains the electromagnetic induction?

Correct Answer: Faraday's Law

Explanation: Faraday's law states that a changing magnetic flux induces an electromotive force (emf) in a conductor.

Related Question 1: Which scientist explained the direction of induced current?

Correct Answer: Lenz

Related Question 2: Which device works on electromagnetic induction?

Correct Answer: Electric generator

AFNS TEST 15-16 September 2025

Question: Which blood group is called the universal donor?

Correct Answer: O negative (O—)

Explanation: O— blood lacks A, B, and Rh antigens, so it can be given to almost all patients in emergencies.

Related Question 1: Which blood group is called the universal recipient?

Correct Answer: AB positive (AB+)

Related Question 2: Who discovered the ABO blood group system?

Correct Answer: Karl Landsteiner

AFNS TEST 15-16 September 2025

Question: Which phylum do sponges belong to?

Correct Answer: Porifera

Explanation: Sponges are the simplest multicellular animals; they have a porous body with canal systems, hence placed in phylum Porifera.

Related Question 1: What is the skeleton of sponges made of?

Correct Answer: Spicules or spongin

Related Question 2: What type of digestion do sponges have?

Correct Answer: Intracellular digestion

AFNS TEST 15-16 September 2025

Question: In SHM, relation between amplitude and velocity is?

Correct Answer: $v = \omega\sqrt{A^2 - x^2}$

Explanation: Velocity in simple harmonic motion depends on displacement (x) and amplitude (A), being maximum at mean position and zero at extreme positions.

Related Question 1: What is maximum velocity in SHM?

Correct Answer: $v_{\max} = \omega A$

Related Question 2: What is the time period formula of SHM?

Correct Answer: $T = 2\pi\sqrt{m/k}$

AFNS TEST 15-16 September 2025

Question: In modern physics, what happens to a moving rod's length at high velocity?

Correct Answer: It contracts (length contraction)

Explanation: According to special relativity, length along the direction of motion decreases as velocity approaches the speed of light: $L = L_0\sqrt{1 - v^2/c^2}$.

Related Question 1: What happens to mass at high velocity?

Correct Answer: It increases

Related Question 2: What happens to time at high velocity?

Correct Answer: It dilates

AFNS TEST 15-16 September 2025

Question: In optics, what is the law of reflection?

Correct Answer: Angle of incidence = angle of reflection

Explanation: A light ray reflects such that the incident ray, reflected ray, and the normal all lie in the same plane, with equal angles.

Related Question 1: What is the angle between incident ray and normal called?

Correct Answer: Angle of incidence

Related Question 2: What type of image does a plane mirror form?

Correct Answer: Virtual and erect

AFNS TEST 15-16 September 2025

Question: Which device converts AC to DC?

Correct Answer: Rectifier

Explanation: A rectifier uses diodes to convert alternating current (AC) into direct current (DC).

Related Question 1: Which device converts DC to AC?

Correct Answer: Inverter

Related Question 2: Which device changes voltage levels in AC circuits?

Correct Answer: Transformer

AFNS TEST 15-16 September 2025

Question: Thermocouple is used to measure?

Correct Answer: Temperature

Explanation: A thermocouple works on the Seebeck effect, generating emf when there is a temperature difference between two junctions.

Related Question 1: Which effect is the reverse of Seebeck effect?

Correct Answer: Peltier effect

Related Question 2: What is the SI unit of temperature?

Correct Answer: Kelvin

AFNS TEST 15-16 September 2025

Question: Nuclear reactions release energy according to which equation?

Correct Answer: $E = mc^2$

Explanation: A small mass defect in nuclear reactions is converted into a large amount of energy as per Einstein's mass–energy equivalence.

Related Question 1: Who gave the equation $E = mc^2$?

Correct Answer: Albert Einstein

Related Question 2: What is the SI unit of energy?

Correct Answer: Joule

AFNS TEST 15-16 September 2025

Question: What is the gestation period in humans?

Correct Answer: About 9 months (280 days)

Explanation: Human pregnancy usually lasts for around 40 weeks or 280 days from the last menstrual cycle.

Related Question 1: What is the gestation period in elephants?

Correct Answer: 22 months

Related Question 2: Where does fertilization occur in humans?

Correct Answer: Fallopian tube

AFNS TEST 15-16 September 2025

Question: Why is the sky blue in color?

Correct Answer: Due to scattering of light (Rayleigh scattering)

Explanation: Shorter wavelengths like blue scatter more in the atmosphere, making the sky appear blue.

Related Question 1: Why does the sun appear red at sunset?

Correct Answer: Longer path causes scattering of shorter wavelengths, leaving red visible.

Related Question 2: Which color scatters the least?

Correct Answer: Red light

AFNS TEST 15-16 September 2025

Question: What is the SI unit of conductance?

Correct Answer: Siemens (S)

Explanation: Conductance is the reciprocal of resistance; its SI unit is Siemens (S).

Related Question 1: What is the SI unit of resistance?

Correct Answer: Ohm (Ω)

Related Question 2: What is the formula of Ohm's law?

Correct Answer: $V = IR$

AFNS TEST 15-16 September 2025

Question: From optics, a convex lens of focal length 20 cm forms an image at 40 cm. Where is the object placed?

Correct Answer: 30 cm

Explanation: Using lens formula $1/f = 1/v - 1/u$, we get $1/20 = 1/40 - 1/u$, solving gives $u = 30$ cm.

Related Question 1: What is the lens formula?

Correct Answer: $1/f = 1/v - 1/u$

Related Question 2: What type of image does a convex lens form if the object is placed at focus?

Correct Answer: At infinity

AFNS TEST 15-16 September 2025

Question: How many carbon atoms are in methyl thiophene?

Correct Answer: 5

Explanation: Thiophene has 4 carbons in its ring; adding one from the methyl group makes a total of 5 carbon atoms.

Related Question 1: How many carbon atoms are in benzene?

Correct Answer: 6

Related Question 2: What is the formula of thiophene?

Correct Answer: C_4H_4S

AFNS TEST 15-16 September 2025

Question: In the sentence “All men must die”, the word “All” is which type of adjective?

Correct Answer: Quantitative adjective

Explanation: The word “All” describes the quantity of men, making it a quantitative adjective.

Related Question 1: Which type of adjective is “This”?

Correct Answer: Demonstrative adjective

Related Question 2: Which type of adjective is “Honest”?

Correct Answer: Qualitative adjective

AFNS TEST 15-16 September 2025

Question: Fill in the blank: Trust ___ God, it will be good.

Correct Answer: in

Explanation: The correct phrase is "Trust in God," where "in" is the proper preposition.

Related Question 1: Fill in: He is good ___ mathematics.

Correct Answer: at

Related Question 2: Fill in: She is fond ___ music.

Correct Answer: of