

TS EAMCET 2026 May 4 Shift 2

Question Paper (Memory-Based)

Conducted by JNTU, Hyderabad



General Instructions

- (i) The test is of 3 hours duration.
- (ii) This test paper consists of 160 questions. The maximum marks are 720.
- (iii) Physics and Chemistry contains 40 questions each and Biology (Botany and Zoology) contains 80 questions.
- (iv) Each question carries +1 marks for correct answer and there is no negative marking for wrong answer.

1. Which of the following correctly defines apomixis?

- (A) It involves fertilisation
- (B) It requires meiosis
- (C) Seeds develop without fertilisation
- (D) It increases genetic variation

2. Casparian strips in the root endodermis are made of:

- (A) Cellulose
- (B) Pectin
- (C) Suberin
- (D) Lignin

3. Which alkaloid is derived from Cinchona bark?

- (A) Morphine
 - (B) Quinine
 - (C) Cocaine
 - (D) Reserpine
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4. The first step in glycolysis is:

- (A) Phosphorylation of glucose
 - (B) Formation of fructose-6-phosphate
 - (C) Formation of PGAL
 - (D) Pyruvate formation
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5. Which of the following is an example of vivipary?

- (A) Rhizophora
 - (B) Opuntia
 - (C) Bryophyllum
 - (D) Agave
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6. Which enzyme converts RNA into DNA in retroviruses?

- (A) DNA polymerase
 - (B) RNA polymerase
 - (C) Reverse transcriptase
 - (D) Helicase
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7. Oogenesis in humans begins:

- (A) At birth
- (B) At puberty

- (C) During foetal development
 - (D) After menarche
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8. ABO blood group system is controlled by:

- (A) Incomplete dominance
 - (B) Codominance with multiple alleles
 - (C) Simple dominance
 - (D) Sex-linked inheritance
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9. Which part of the nephron is impermeable to water?

- (A) Proximal convoluted tubule
 - (B) Loop of Henle (ascending limb)
 - (C) Collecting duct
 - (D) Bowman's capsule
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10. Which respiratory pigment is found in cockroaches?

- (A) Haemoglobin
 - (B) Haemerythrin
 - (C) Haemocyanin
 - (D) None – no respiratory pigment
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11. Ohm's law is valid when:

- (A) Resistance varies with temperature
- (B) Temperature and physical conditions remain constant
- (C) Conductor is non-ohmic
- (D) Frequency of AC is changed

12. The SI unit of magnetic flux density (B) is:

- (A) Weber
 - (B) Tesla
 - (C) Henry/metre
 - (D) Gauss
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13. Lenz's law is a consequence of conservation of:

- (A) Mass
 - (B) Charge
 - (C) Energy
 - (D) Momentum
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14. Which hydrogen atom transition emits light in the Balmer series (visible)?

- (A) $n=2 \rightarrow n=1$
 - (B) $n=3 \rightarrow n=2$
 - (C) $n=4 \rightarrow n=1$
 - (D) $n=3 \rightarrow n=1$
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15. Energy band gap of an insulator is approximately:

- (A) 0 eV
 - (B) 0.1 eV
 - (C) Less than 3 eV
 - (D) Greater than 3 eV
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16. The half-life of a first-order reaction is:

- (A) $0.693/k$
 - (B) $k/0.693$
 - (C) $1/k$
 - (D) $k \times 0.693$
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17. Catalyst used in the Haber process for ammonia synthesis:

- (A) Platinum
 - (B) V_2O_5
 - (C) Iron (with K_2O , Al_2O_3 promoters)
 - (D) Nickel
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18. Highest boiling point among these isomers (C_5H_{12}):

- (A) n-pentane
 - (B) neopentane
 - (C) isopentane
 - (D) 2-methylbutane
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19. Ethanol + Water shows:

- (A) Negative deviation from Raoult's law
 - (B) Zero deviation (ideal)
 - (C) Positive deviation from Raoult's law
 - (D) Azeotrope from start
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20. The shape of XeF_4 is:

- (A) Tetrahedral
- (B) Square planar

(C) See-saw

(D) Trigonal bipyramidal
