

TS EAMCET 2026 May 5 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. The transfer cells are found in:

- (A) Phloem
- (B) Xylem
- (C) Both phloem and xylem
- (D) Epidermis

2. Which of the following shows the most primitive vascular system?

- (A) Selaginella
- (B) Psilotum
- (C) Equisetum
- (D) Lycopodium

3. Photorespiration involves which sequence of organelles?

- (A) Chloroplast → Mitochondria → Peroxisome
 - (B) Chloroplast → Peroxisome → Mitochondria
 - (C) Peroxisome → Chloroplast → Mitochondria
 - (D) Mitochondria → Peroxisome → Chloroplast
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4. The respiratory quotient (RQ) of fats is:

- (A) 1.0
 - (B) Greater than 1
 - (C) Less than 1
 - (D) 0
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5. Entomophily (insect pollination) is found in:

- (A) Maize
 - (B) Coconut
 - (C) Salvia
 - (D) Vallisneria
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6. Haemoglobin in RBCs is a:

- (A) Glycoprotein
 - (B) Metalloprotein (chromoprotein)
 - (C) Lipoprotein
 - (D) Simple protein
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7. Which of the following is a correct statement about the lac operon?

- (A) It is constitutively expressed
- (B) It is induced by lactose (allolactose)

- (C) It codes for enzymes that metabolise glucose
 - (D) It is found in eukaryotes
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8. The process by which nitrogenous waste is removed in insects is:

- (A) Kidneys
 - (B) Malpighian tubules
 - (C) Flame cells
 - (D) Contractile vacuoles
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9. Colostrum is rich in:

- (A) Carbohydrates
 - (B) IgA antibodies
 - (C) Lipids
 - (D) Minerals
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10. Which of the following is an ectothermic animal?

- (A) Mammals
 - (B) Birds
 - (C) Reptiles
 - (D) None of these
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11. The rms speed of gas molecules is given by:

- (A) $\sqrt{3RT/M}$
- (B) $\sqrt{2RT/M}$
- (C) $\sqrt{RT/M}$
- (D) $3RT/M$

12. A p-n junction in reverse bias:

- (A) Large current flows
 - (B) Depletion region widens, only tiny leakage current flows
 - (C) Depletion region narrows
 - (D) Breakdown occurs always
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13. Beats are produced by superposition of two waves with:

- (A) Same frequency and amplitude
 - (B) Slightly different frequencies
 - (C) Opposite phases
 - (D) Same wavelength
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14. The half-life of a radioactive substance is 10 days. After 30 days, fraction remaining is:

- (A) $1/4$
 - (B) $1/8$
 - (C) $1/2$
 - (D) $1/16$
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15. A transformer: secondary turns = $2 \times$ primary, input voltage = 220V. Output voltage is:

- (A) 110 V
 - (B) 220 V
 - (C) 440 V
 - (D) 55 V
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16. Which colligative property is used to determine molar mass of polymers?

- (A) Boiling point elevation
 - (B) Freezing point depression
 - (C) Osmotic pressure
 - (D) Vapour pressure lowering
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17. Gas produced when copper reacts with dilute HNO_3 :

- (A) NO_2
 - (B) NO
 - (C) H_2
 - (D) NH_3
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18. Hybridisation of carbon in ethyne (acetylene) is:

- (A) sp^3
 - (B) sp^2
 - (C) sp
 - (D) sp^3d
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19. Phenol is more acidic than alcohol because:

- (A) O–H bond is weaker
 - (B) Phenoxide ion is resonance stabilised
 - (C) Phenol is a solid
 - (D) Higher molecular weight
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20. SN_2 reactions are favoured by:

- (A) Tertiary substrates
- (B) Polar protic solvents

(C) Primary substrates and polar aprotic solvents

(D) Secondary substrates and heat
