

# GUJCET 2016

## Code 11

### BIOLOGY

10/05/2016

1. Choose the correct option for statement P, Q and R in relevance to grass.

Statement P - Flower possess attractive colour and fragrance

Statement Q - Pollengrains are small, dry and light in weight

Statement R - Grass is air pollinated plant.

(A) Both P and Q are true. R is correct explanation of Q

(B) P is true and Q is false. R is correct explanation of P.

(C) P is false and Q is true. R is the correct explanation of Q

(D) Both P and Q are false. R has no relation with P and Q.

Ans. (C) P is false and Q is true. R is the correct explanation of Q

[Pg. 42, GSEB 4<sup>th</sup> Sem.]

2. Which is the correct option for the maintenance of the conc. of urine?

(A) Counter current produced in two limbs of Henle's loop

(B) Counter current produced in two limbs of Vasa recta

(C) Ascending limb of Henle's loop

(D) Counter current produced by Henle's loop and Vasa recta

Ans. (D) Counter current produced by Henle's loop and Vasa recta

[Pg. 94, GSEB 3<sup>rd</sup> Sem.]

3. Function of ADH -

(A) Water absorption from the latero-posterior parts of the tubules.

(B) Facilitates water re-absorption from posterior parts of the tubules.

(C) Facilitates water absorption from the distal parts of the tubules.

(D) All the above

Ans. (B) Facilitates water re-absorption from posterior parts of the tubules.

[Pg. 96, GSEB 3<sup>rd</sup> Sem.]

4. How many facial bones are present in pair?

(A) 5

(C) 14

(D) 7

Ans. (B) 6

[Pg. 105, GSEB 3<sup>rd</sup> Sem.]

5. Prolong activation of striated muscle causes it to fatigue. What is the reason?

(A) Breakdown of glycogen into lactic acid in muscle during aerobic respiration.

(B) Breakdown of glycogen into lactic acid in muscle during anaerobic respiration

(C) Breakdown of lactic acid into glycogen during anaerobic respiration

(D) Produce ethanol in muscles

Ans. (B) Breakdown of glycogen into lactic acid in muscle during anaerobic respiration

[Pg. 105, GSEB 3<sup>rd</sup> Sem.]

6. In deep freshwater ponds, different layers of water with different temperatures are noticed. This is known as

(A) Thermal stratification

(B) Surface tension

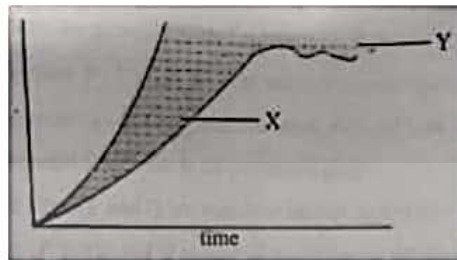
(C) Water equilibrium

(D) Thermal equilibrium

Ans. (A) Thermal stratification



7. What indicates 'X' and 'Y' in the given figure?



- (A) X-Potential natality, Y-Carrying capacity
- (B) X-Environmental resistance, Y-Potential natality
- (C) X-Carrying capacity, Y-Environmental resistance
- (D) X-Environmental resistance, Y-Carrying capacity

Ans. (D) X-Environmental resistance, Y-Carrying capacity

[Pg. 117, GSEB 3<sup>rd</sup> Sem.]

8. Statement A: The flow of energy is unidirectional in Ecosystem  
Reason R: Consumers utilize the chemical energy as food and it is released into the atmosphere in the form of heat energy. It cannot be reused

- (A) A and R both are true and R is the reason for A
- (B) A and R both are false R is not the reason for A
- (C) A is true but R is false
- (D) A is false but R is true

Ans. (A) A and R both are true and R is the reason for A

[Pg. 134, GSEB 3<sup>rd</sup> Sem.]

9. Where more than half of the species on the earth live?

- (A) Tropical zone
- (B) Temperate zone
- (C) Dry tropical forests
- (D) Moist tropical forest.

Ans. (D) Moist tropical forest

[Pg. 146, GSEB 3<sup>rd</sup> Sem.]

10. Match the Column -1 and II. Choose the correct option.

Column -1		Column - II	
P	e - waste	i)	Waste clothing
Q	Biodegradable waste	ii)	Dirt
R	Inert waste	iii)	Green waste
S	Composite waste	iv)	Irreparable waste

- (A) (P - i) (Q - ii) (R - iv) (S - iii)
- (B) (P - iv) (Q - iii) (R - ii) (S - i)
- (C) (P - iii) (Q - iv) (R - i) (S - ii)
- (D) (P - iv) (Q - iii) (R - i) (S - ii)

Ans. (B) (P - iv) (Q - iii) (R - ii) (S - i)

[Pg. 163,164, GSEB 3<sup>rd</sup> Sem.]

11. What are called micelles during absorption?

- (A) small glycerol molecules
- (B) small droplets of fatty acids
- (C) very small fat droplets
- (D) large fat molecules

Ans. (B) small droplets of fatty acids

[Pg. 62, GSEB 3<sup>rd</sup> Sem.]

12. In \_\_\_\_\_, both dominant and recessive alleles lack their dominant and recessive relationships.

- (A) Incomplete dominance
- (B) Polygenic inheritance
- (C) Multiple alleles
- (D) Co-dominance

Ans. (D) Co-dominance

[Pg. 91, GSEB 4<sup>th</sup> Sem.]

13. Match the following. Choose the correct option.

Disease	Symptoms
P - Gonorrhoea	i) loss of appetites, pain upper right abdomen
Q - Trichomoniasis	ii) white patches on the tongue or roof of buccal cavity
R - Hepatitis B	iii) pain while passing urine
S - Syphilis	iv) itching in and around vagina

(A) (P - i) (Q - iv) (R - ii) (S - iii)

(B) (P - iv) (Q - iii) (R - ii) (S - i)

(C) (P - iii) (Q - iv) (R - i) (S - ii)

(D) (P - iii) (Q - i) (R - ii) (S - iv)

Ans. (C) (P - iii) (Q - iv) (R - i) (S - ii)

[Pg. 80, GSEB 4<sup>th</sup> Sem.]

14. Mendel's law of segregation is also known as –

(A) Law of separation

(B) Law of dominance

(C) Law of purity of gametes

(D) Law of independent assortment

Ans. (C) Law of purity of gametes

[Pg. 88, GSEB 4<sup>th</sup> Sem.]

15. Transgenic animals mean

(A) Genes of these animals are introduced into other animals

(B) All the genes are from the same animal

(C) These animals are used as vector

(D) The introduction of exogenous DNA into the genome of an animal to create and maintain a stable heritable character.

Ans. (D) The introduction of exogenous DNA into the genome of an animal to create and maintain a stable heritable character.

[Pg. 174, GSEB 4<sup>th</sup> Sem.]

16. Which type of movement is observed in Drocera?

(A) Thigmotropism

(B) Hydrotropism

(C) Hydronasty

(D) Thigmonasty

Ans. (D) Thigmonasty

[Pg. 62, GSEB 4<sup>th</sup> Sem.]

17. In which phase of menstrual cycle progesterone level rises?

(A) Menstrual phase

(B) Proliferative phase

(C) Secretory phase

(D) Maturation phase

Ans. (C) Secretory phase

[Pg. 71, GSEB 4<sup>th</sup> Sem.]

18. in which of the following cry protein is synthesized?

(A) Simple cotton

(B) Bt Cotton only

(C) bacillus thuringiensis only

(D) Bt cotton and Bacillus thuringiensis

Ans. (D) Bt cotton and Bacillus thuringiensis

[Pg. 172, GSEB 4<sup>th</sup> Sem.]

19. In Recombinant DNA technology which technique is used to separate fragments of DNA?

(A) Electroporation

(B) Particle bombardment

(C) Agarose gel electrophoresis

(D) Electrolysis

Ans. (C) Agarose gel electrophoresis

[Pg. 165, GSEB 4<sup>th</sup> Sem.]

20. Which of the following is not included into anthropoids?

(A) Gibbon

(B) Chimpanzee

(C) Lemur

(D) Human

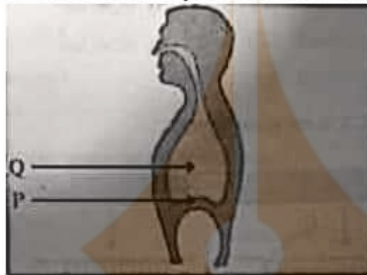
Ans. (C) Lemur

[Pg. 153, GSEB 4<sup>th</sup> Sem.]



21. What is fused with maize for the manufacturing of genetically modified (G.M.) sugar in America?  
 (A) Brazzein (B) Basmati (C) Cane sugar (D) Zeamin  
 Ans. (A) Brazzein [Pg. 177, GSEB 4<sup>th</sup> Sem.]

22. Identify P and Q in the figure and mention the process takes place.

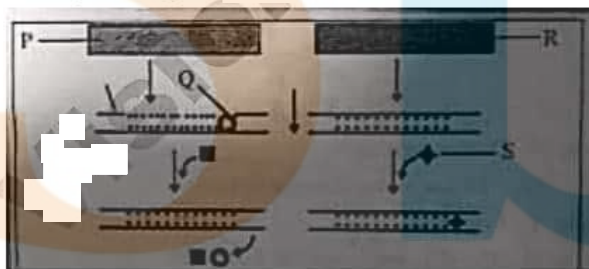


- (A) P - Diaphragm relax, Q - Thoracic cavity increases Inhalation  
 (B) P - Diaphragm contract, Q - Thoracic cavity decreases Exhalation  
 (C) P - Diaphragm relax, Q - Thoracic cavity reduces Exhalation  
 (D) P - Diaphragm contract, Q - Thoracic cavity increases Exhalation  
 Ans. [BONUS] P–Diaphragm relax, Q–thoracic cavity increases exhalation. [Pg. 70, GSEB 3<sup>rd</sup> Sem.]

23. Mostly bread is in the semisweet taste due to  
 (A) Yeast (B) Remnants of alcohol (C) Sugar (D) Acetic acid  
 Ans. (B) Remnants of alcohol

24. What is the time gap when atria and ventricle both undergoes diastole?  
 (A) 0.10 sec (B) 0.50 sec (C) 0.40 sec (D) 0.30 sec  
 Ans. (C) 0.40 sec [Pg. 84, GSEB 3<sup>rd</sup> Sem.]

25. Identify P, Q, R, S in the given figure



- (A) P - Negative Regulation, Q – Inhibitor, R - Effector molecule, S - Positive Regulation  
 (B) P - Positive Regulation, Q - Effector molecule, R - Inhibitor, S - Negative Regulation  
 (C) P - Negative Regulation, Q – Inhibitor, R - Positive Regulation, S - Effector molecule  
 (D) P- Positive Regulation, Q - Effector Molecule, R - Negative Regulation, S – Inhibitor  
 Ans. (C) P - Negative Regulation, Q – Inhibitor, R - Positive Regulation, S - Effector molecule [Pg. 131, GSEB 4<sup>th</sup> Sem.]

26. Pathogenic which is responsible for the production of tumor in most of dicot plants.  
 (A) Retrovirus (B) Bacteriophage (C) Ti plasmid (D) Vector  
 Ans. (C) Ti plasmid [Pg. 164, GSEB 4<sup>th</sup> Sem.]

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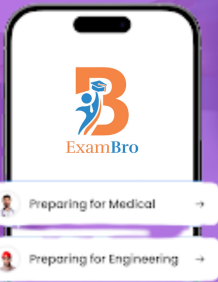


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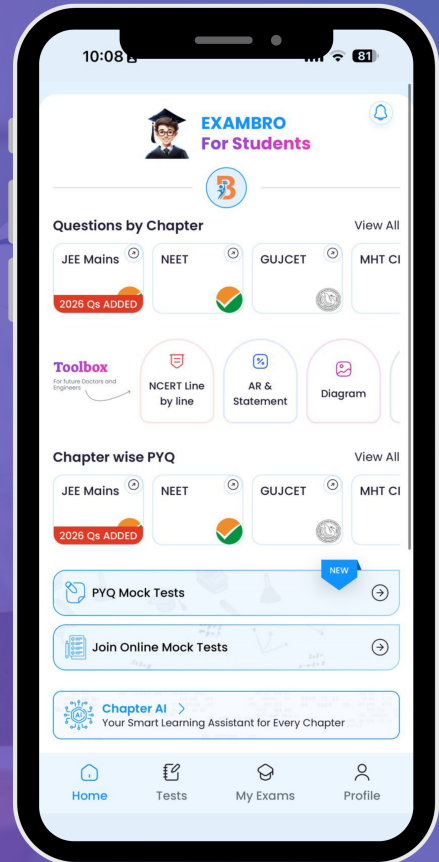
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27. Which Genetic codon has dual functions?

- (A) AGU (B) ACG (C) AUA (D) AUG

Ans. (D) AUG

[Pg. 124, GSEB 4<sup>th</sup> Sem.]

28. Match the Column - I and II and choose the correct option.

Column - I	Column - II
P) Pepsin	i) Casein → Paracasein
Q) Erepsin	ii) Polypeptides → Peptides and amino acids
R) Carboxypeptidase	iii) Proteins → Proteoses + Peptones
S) Renin	iv) Dipeptide → amino acids

- (A) (P-iii) (Q-iv) (R-i) (S-ii)  
 (B) (P-iii) (Q - iv) (R - ii) (S - i)  
 (C) (P-iv) (Q-ii) (R-iii) (S-i)  
 (D) (P - i) (Q-iii) (R-iv) (S-ii)

Ans. (B) (P-iii) (Q - iv) (R - ii) (S - i)

[Pg. 60, GSEB 3<sup>rd</sup> Sem.]

29. Identify 'X' and 'Y' in the given diagram



- (A) X-Inter neuron, Y-Cell body of motor neuron  
 (B) X-Cell body of motor neuron, Y-Dorsal root ganglion  
 (C) X-Inter neuron, Y-Sensory neuron  
 (D) X-Inter neuron, Y-Dorsal root ganglion

Ans. (B) X-Cell body of motor neuron, Y-Dorsal root ganglion

[Pg. 9, GSEB 4<sup>th</sup> Sem.]

30. Activities like running, talking and typing are controlled by

- (A) Cerebellum (B) pons (C) Medulla oblongata (D) Mid brain

Ans. (A) Cerebellum

[Pg. 8, GSEB 4<sup>th</sup> Sem.]

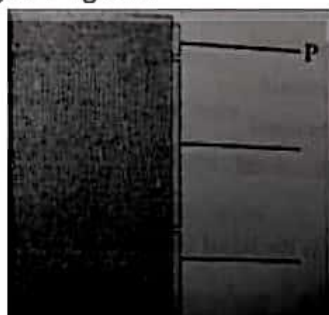
31. How many endocrine glands are located in human brain?

- (B) 04 (C) 02 (D) 09

Ans. (C) 02, Pituitary and Pineal glands

[Pg. 17, GSEB 4<sup>th</sup> Sem.]

32. What is the function of 'P' in the given figure?



- (A) Regulate carbohydrate, protein and fat metabolism
- (B) Regulate the mineral metabolism
- (C) Development of female sexual characters
- (D) Antiallergic and anti-inflammatory effects

Ans. (B) Regulate the mineral metabolism

[Pg.19, GSEB 4<sup>th</sup> Sem.]

33. 32 chromosomes are present in the green leaf of onion. When meiosis takes place to produce gametes after fertilization, how many chromosomes will be there in triploid nucleus?

- (A) 32
- (B) 16
- (C) 48
- (D) 08

Ans. (C) 48 [ $2n = 32$ ;  $3n = 48$ ]

[Pg.31, GSEB 4<sup>th</sup> Sem.]

34. "Pollen grains are protected by a mucilaginous covering and having specific gravity". This is the characteristic of which type of pollination?

- (A) Anemophily
- (B) Entomophily
- (C) Hydrophily
- (D) Zoophily

Ans. (C) Hydrophily

[Pg.43, GSEB 4<sup>th</sup> Sem.]

35. The movement of water and minerals in xylem and the movement of phloem sap in phloem is respectively.

- (A) Unidirectional, bidirectional
- (B) Bidirectional, bidirectional
- (C) Bidirectional, unidirectional
- (D) Unidirectional, unidirectional

Ans. (A) Unidirectional, bidirectional

[Pg. 9, GSEB 3<sup>rd</sup> Sem.]

36. In the given figure, which is the initial condition of plasmolysis?



- (A) P
- (B) Q
- (C) R
- (D) S

Ans. (B) Q

[Pg. 5, GSEB 3<sup>rd</sup> Sem.]

37. Which of the following group belongs to macronutrient elements?

- (A) B, N
- (B) Ca, P
- (C) Ni, Na
- (D) K, Co

Ans. (B) Ca, P

[Pg. 16, GSEB 3<sup>rd</sup> Sem.]

38. What are the names of free living aerobic and anaerobic nitrogen fixation bacteria respectively?  
(A) Rhizobium – Clostridium (B) Azotobacter - Clostridium  
(C) Azotobacter – Agrobacterium (D) Agrobacterium – Clostridium

Ans. (B) Azotobacter - Clostridium [Pg. 24, GSEB 3<sup>rd</sup> Sem.]

39. Choose the correct option for the chloroplast of bundle sheath from the following.  
(A) They show grana organization  
(B) They do not show grana organization  
(C) They do not possess thylakoid  
(D) They possess thylakoid and grana organization

Ans. (B) They do not show grana organization [Pg. 35, GSEB 3<sup>rd</sup> Sem.]

40. In glycolysis process during which reaction water molecule is released?  
(A) 2 phosphoglyceric acid → phosphoenol pyruvic acid  
(B) PGAL → BPGA  
(C) 1,3 biphosphoglyceric acid → phosphoglyceric acid  
(D) phosphoenol pyruvic acid → pyruvic acid

Ans. (A) 2 phosphoglyceric acid → phosphoenol pyruvic acid. [Pg. 43, GSEB 3<sup>rd</sup> Sem.]



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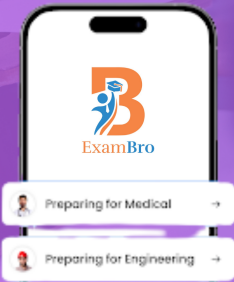


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