FEDERAL PUBLIC SERVICE COMMISSION

COMPETITIVE EXAMINATION-2026
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

CSS Zoology Paper 2026

Roll Number

TIME ALLOWED: THREE HOURS	**PART-I MCQS MAXIMUM MARKS = 20**
PART-I (MCQS): MAXIMUM 30 MINUTES	**PART-II MCQS MAXIMUM MARKS = 80**

NOTE:

1. First attempt PART-I (MCQs) on separate OMR Answer Sheet which shall be taken back after 30 minutes.
2. Overwriting/cutting of the options/answers will not be given credit.
3. There is no negative marking. All MCQs must be attempted.

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ZOOLOGY

TIME ALLOWED: THREE HOURS	(PART-I MCQs) MAXIMUM MARKS: 20
PART-I (MCQs) : MAXIMUM 30 MINUTES	(PART-II) MAXIMUM MARKS: 80

NOTE: (i) First attempt **PART-I (MCQs)** on separate **OMR Answer Sheet** which shall be taken back after **30 minutes.**
(ii) **Overwriting/cutting of the options/answers will not be given credit.**
(iii) There is **no negative** marking. All MCQs must be attempted.

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PART-I (MCQs)(COMPULSORY)

Q.1. (i) Select the best option/answer and fill in the appropriate Box ☐ on the **OMR Answer Sheet. (20x1=20)**
(ii) Answers given anywhere else, other than OMR Answer Sheet, will not be considered.

1. **In mammals, the corpus callosum links the:**
(A) Two cerebellar hemispheres (B) Brainstem to cerebrum
(C) Two cerebral hemispheres (D) None of these
2. **Which contributes most to global warming on a per-molecule basis?**
(A) CO_2 (B) N_2O (C) Methane (D) None of these
3. **The evolutionary transition from unicellularity to multicellularity is best supported by which protozoan feature?**
(A) Contractile vacuole (B) Encystment (C) Binary fission (D) None of these
4. **Countercurrent exchange mechanism in fish gills ensures:**
(A) Blood meets water with higher O_2 content continuously
(B) Blood and water flow in same direction (C) Minimal diffusion (D) None of these
5. **The primary pacemaker of the vertebrate heart is the:**
(A) AV node (B) SA node (C) Bundle of His (D) None of these
6. **The most evolutionarily advanced type of nephridium in annelids is:**
(A) Protonephridium (B) Metanephridium (C) Malpighian tubule (D) None of these
7. **Which characteristic best explains the functional advantage of the vertebrate epidermis compared to the invertebrate integument?**
(A) Presence of keratinized layers reducing water loss (B) Higher chitin concentration
(C) Greater density of gland cells (D) None of these
8. **In Porifera, the primary function of spicules is to:**
(A) Perform intracellular digestion (B) Maintain structural support and deter predators
(C) Control water flow (D) None of these
9. **The evidence for chordate ancestry in echinoderms mainly relies on:**
(A) Pentaradial symmetry (B) Coelomic partitioning
(C) Deuterostome embryonic development (D) None of these
10. **A counter-current exchange mechanism in gill respiration increases efficiency because:**
(A) Blood and water flow in the same direction (B) It prevents CO_2 diffusion
(C) Blood meets water with decreasing oxygen concentrations (D) None of these
11. **The reptilian heart differs from amphibians by:**
(A) Partial ventricular septation decreasing mixing (B) Completely separated ventricles
(C) Presence of three atria (D) None of these
12. **Ecological succession from bare rock to forest illustrates:**
(A) Secondary succession (B) Primary succession (C) Climax reversal (D) None of these
13. **Avian air sacs primarily function to:**
(A) Store oxygen (B) Reduce body temperature
(C) Maintain unidirectional airflow and enhance gas exchange efficiency (D) None of these
14. **Crossing over occurs in:**
(A) Mitosis metaphase (B) Meiosis I metaphase (C) Meiosis II metaphase (D) None of these
15. **Social hierarchy in animal groups most strongly contributes to:**
(A) Reduced lifespan (B) Increased predation
(C) Elimination of communication (D) None of these
16. **Nematodes exhibit high internal pressure primarily because of:**
(A) Muscular pharynx (B) Pseudocoel functioning as a hydrostatic skeleton
(C) Chitinous exoskeleton (D) None of these
17. **The predominant force stabilizing tertiary protein structure in aqueous environment is:**
(A) Ionic bonds (B) Hydrogen bonding (C) Hydrophobic interactions (D) Disulfide bridges

NOTE:

i. **Part-II** is to be attempted on the separate **Answer Book.**

ii. Attempt **ALL** questions from **Part-II.**

iii. All the parts (if any) of each Question must be attempted at one place instead of at different places.

iv. Write **Q.NO** in the **Answer Book** in according with **Q.No** in the **Q.Paper.**

v. **No Page/Space** be left blank between the answers. All the blank pages of **Answer Book** must be crossed.

vi. Extra attempt of any question or any part of the question will not be considered.

Q2. Discuss transcription and translation in eukaryotic cells and explain how they represent the central dogma of molecular biology.
Q3. Elaborate homeostasis in animals with emphasis on kidney function and osmoregulatory mechanisms.
Q4. Describe the major classes of biomolecules and discuss their role in maintaining the structural and functional integrity of animal cells. Also, describe which one of these biomolecules is most important in your opinion.
Q5. What is metamerism in Annelids? Explain its evolutionary and ecological implications.
Q6. Discuss major characteristics of reptiles and explain adaptations that enabled them to become successful terrestrial vertebrates.
Q7. Discuss hormonal coordination in vertebrates, detailing hormone types and mechanisms of hormone action.
Q8. Write short notes on any TWO of the following:
(a) Amphibians
(b) Smog – past, present, and challenges
(c) Parasitic Adaptations in Platyhelminthes

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18. **Greenhouse gases trap heat mainly because they:**
(A) Absorb ultraviolet radiation (B) Absorb and re-emit infrared radiation
(C) Scatter visible light (D) Increase ozone production

19. **Deuterostome pattern in echinoderms is supported by:**
(A) Spiral cleavage (B) Determinate development (C) Enterocoely (D) None of these

20. **Regulation of food intake is primarily coordinated by:**
(A) Hypothalamus (B) Cerebellum (C) Pineal gland (D) None of these

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PART-II

NOTE: (i) **Part-II** is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II. ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

Q. No. 2. Discuss transcription and translation in eukaryotic cells and explain how they represent the central dogma of molecular biology. **(20)**

Q. No. 3. Elaborate homeostasis in animals with emphasis on kidney function and osmoregulatory mechanisms. **(20)**

Q. No. 4. Describe the major classes of biomolecules and discuss their role in maintaining structural and functional integrity of animal cells. Also describe which one of these biomolecules is most important in your opinion. **(20)**

Q. No. 5. What is metamerism in Annelids? Explain its evolutionary and ecological implications. **(20)**

Q. No. 6. Discuss major characteristics of reptiles and explain adaptations that enabled them to become successful terrestrial vertebrates. **(20)**

Q. No. 7. Discuss hormonal coordination in vertebrates, detailing hormone types and mechanisms of hormone action. **(20)**

Q. No. 8. Write short notes on any TWO of the following: **(10 each)** **(20)**
a. Amphibians
b. Smog – past, present and challenges
c. Parasitic Adaptations in Platyhelminthes

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