

## BIOLOGY PAPER-II GROUP-I MTN-I-21

TIME ALLOWED: 20 Minutes

OBJECTIVE

MAXIMUM MARKS: 17

**Note:** You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

## Q.No.1

- (1) The excretory product that requires minimum water for its elimination as compared to others is:  
(A) Uric acid (B) Urea (C) Ammonia (D) Creatinine
- (2) Which of the following is called as Excretophore?  
(A) Stem (B) Root (C) Leaf (D) Seed
- (3) Which of the following cells lack of secondary walls?  
(A) Sclerenchyma (B) Collenchyma (C) Mesophyll (D) Vessels
- (4) Vertebrae of neck region are called:  
(A) Lumbar (B) Thoracic (C) Cervical (D) Pelvic
- (5) The meristems that are found at the tips of roots and shoots are called:  
(A) Lateral meristems (B) Intercalary meristems (C) Secondary meristems (D) Apical meristems
- (6) In Microcephaly, the individuals are born with small:  
(A) Skull (B) Neck (C) Jaws (D) Vertebrae
- (7) Crossing over is occurred in:  
(A) Zygotene (B) Pachytene (C) Leptotene (D) Diplotene
- (8) Down's syndrome has number of chromosomes:  
(A) 47 (B) 45 (C) 46 (D) 44
- (9) The receptors which produce the sensation of pain are called:  
(A) Chemo receptors (B) Photo receptors (C) Nociceptors (D) Thermo receptors
- (10) Parthenocarpy is artificially induced by adding:  
(A) Auxins (B) Ethene (C) Abscissic acid (D) Gibberellins
- (11) Highly condensed portions of chromatin are called:  
(A) Euchromatin (B) Chromatids (C) Centromere (D) Heterochromatin
- (12) Position of gene on chromosome is called:  
(A) Allele (B) Genotype (C) Locus (D) Phenotype
- (13) The enzyme which is used to cut out the gene of interest, is called:  
(A) DNA Ligase (B) Restriction Endonucleases (C) RNA Polymerase (D) DNA Polymerase
- (14) Archaeobacteria can tolerate temperature upto:  
(A) 120°C (B) 122°C (C) 125°C (D) 115°C
- (15) The actual location of place, where an organism lives is called its:  
(A) Niche (B) Environment (C) Biome (D) Habitat
- (16) In aquatic ecosystem near shore zone is called:  
(A) Limnetic zone (B) Profundal zone (C) Littoral zone (D) Benthic zone
- (17) A treasure of all types of resources essential to maintain life on earth is:  
(A) Environment (B) Water (C) Land (D) Sun

**NOTE:** Write same question number and its part number on answer book,  
as given in the question paper.

**SECTION-I****2. Attempt any eight parts.****8 × 2 = 16**

- (i) Compare hypotonic and hypertonic solution.
- (ii) How arthropods and mammals overcome the problem of evaporative water loss?
- (iii) Write the formula of uric acid.
- (iv) What is the role of vacuole in generating turgor pressure in plant cells?
- (v) What are cartilaginous joints?
- (vi) How does shape of wing affect the type of flight in birds?
- (vii) What is climactic?
- (viii) Define apomixis.
- (ix) What is profundal zone?
- (x) Compare prairies and savanna.
- (xi) Define pollution. Write any two types of pollution.
- (xii) What are the harmful effects of lead compounds and carbon monoxide?

**3. Attempt any eight parts.****8 × 2 = 16**

- (i) What are neuroglia?
- (ii) Define nerve impulse.
- (iii) Enlist hormones secreted by posterior lobe of pituitary gland.
- (iv) What are jumping genes?
- (v) Define probability. What is product rule?
- (vi) Define over dominance.
- (vii) What is recombinant DNA?
- (viii) What are plasmids? Give example.
- (ix) Write role of DNA Ligase.
- (x) Differentiate between population and community.
- (xi) Define ecological niche.
- (xii) Name six major terrestrial Biomes.

**4. Attempt any six parts.****6 × 2 = 12**

- (i) Differentiate between growth and development.
- (ii) Compare epiblast and hypoblast in gastrulation stage of chick development.
- (iii) What is the function of RNA polymerase in Transcription?
- (iv) What is Nucleosome?
- (v) What is "One gene one polypeptide" Hypothesis?
- (vi) Define cell cycle.
- (vii) Give the significance of Meiosis.
- (viii) State Endosymbiont Hypothesis.
- (ix) What are fossils? Where are they found?

**SECTION-II**

**NOTE:** Attempt any three questions.

**3 × 8 = 24**

- 5.(a) Write a note on kidney problems and its cures. 4
- (b) What are acid rains? Write its effects. 4
- 6.(a) Describe different phases of repair process of simple fracture. 4
- (b) Describe the process of transcription. 4
- 7.(a) Discuss in detail the hormones produced by Anterior pituitary. 4
- (b) Write notes on the following: 4  
(i) Eutrophication (ii) Greenhouse effect
- 8.(a) Write a note on fruit set and fruit ripening. 4
- (b) What are multiple alleles? Explain with an example. 4
- 9.(a) Describe the process of Neurulation in chick development. 4
- (b) Discuss factors affecting gene frequency of population. 4