FEDERAL PUBLIC SERVICE COMMISSION

COMPETITIVE EXAMINATION FOR RECRUITMENT TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT, 2011

Roll Number

BOTANY, PAPER-II

TIME ALLOWED: THREE HOURS	**(PART-I MCQs)**	**30 MINUTES**	**MAXIMUM MARKS: 20**
	(PART-II)	**2 HOURS & 30 MINUTES**	**MAXIMUM MARKS: 80**

NOTE: (i) **First** attempt **PART-I (MCQs)** on separate Answer Sheet which shall be taken back after 30 minutes.

(ii) **Overwriting/cutting of the options/answers will not be given credit.**

(PART-I MCQs) (COMPULSORY)

Q.1. Select the best option/answer and fill in the **appropriate box** on the **Answer Sheet.** **(1 x 20=20)**

(i) Reduction takes place in ------ stage of meiosis.

(a) Metaphase I (b) Anaphase I (c) Telophase I (d) None of these

(ii) Group of young cells which are capable of active cell division is called:

(a) Meristem (b) Parenchyma (c) Periderm (d) None of these

(iii) Genetic basis of ABO blood group system was explained by;

(a) Landsteiner (b) Levine (c) Bernstein (d) None of these

(iv) Allele for whiteness in Drosophila is:

(a) Recessive (b) Dominant (c) Codominant (d) None of these

(v) Major unit of Ecology is:

(a) Ecosystem (b) Biosphere (c) Community (d) None of these

(vi) Primary succession that starts on dry soil/rock is called:

(a) Derosere (a) Xerosere (a) Lithosere (a) None of these

(vii) The way Glucose is metabolized/oxidized depends on the availability of:

(a) CO_2 (b) O_2 (c) Energy (d) None of these

(viii) The absorbing peak of Chlorophyll is:

(a) 680 (b) 670 (c) All of these (d) None of these

(ix) Light can work in photosynthesis only when it is:

(a) Absorbed (b) Transmitted (c) Reflected (d) None of these

(x) Cellular respiration consists of:

(a) Glycosis (b) Kreb's cycle and respiratory chain (c) All of these (d) None of these

(xi) The chemical wastes from Industry are called as:

(a) Effluents (b) Garbage (c) Sewage (d) None of these

(xii) All chromosomes other than sex chromosomes are called as:

(a) Autosomes (b) Dictyosomes (c) Autophagosomes (d) None of these

(xiii) Actual place/location where organism lives is called as:

(a) Habitat (b) Domain (c) Niche (d) None of these

(xiv) In roots and stems having secondary growth, the epidermis is replaced by a protective layer called:

(a) Phellogen (b) Periderm (c) Cuticle (d) None of these

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(xv) The stomata with 2 large and one small subsidiary cells surrounding stoma is called as:

(a) Diacytic (b) Anisocytic (c) Cyclocytic (d) None of these

(xvi) Vacuoles are filled with watery fluid called as:

(a) Cell sap (a) Enzymes (a) Plastids (a) None of these

(xvii) The chromosomes arrange themselves on the equator of spindle fibres during:

(a) Metaphase (b) Anaphase (c) Telophase (d) None of these

(xviii) The event that gives rise to the heritable alteration in the genotype is termed as:

(a) Translocation (b) Abnormality (c) Mutation (d) None of these

(xix) The sequence of genes along the DNA strand is called as:

(a) Genetic code (b) Chromosomal aberration (c) DNA sequence (d) None of these

(xx) Chemicals used to destroy animal pests are:

(a) Herbicides (b) Pesticides (c) Insecticides (d) None of these

PART-II

NOTE:(i) **PART-II** is to be attempted on separate Answer Book.
(ii) **Attempt ONLY FOUR questions from PART-II. All questions carry EQUAL marks.**
(iii) **Extra attempt of any question or any part of the attempted question will not be considered.**

Q.2. What is dormancy? Enlist different methods to break dormancy? **(20)**

Q.3. Write down short notes on: **(7+7+6=20)**

(a) Food chain **(b)** Vernalization **(c)** Adaptive mutations

Q.4. Give the Biosynthesis and mode of action of Abscissic acid. **(20)**

Q.5. Define linkage. Explain the phenomenon of coupling and repulsion with reference to linkage. Give example. **(20)**

Q.6. What do you mean by evolution? How would you explain Lamarkism? **(20)**

Q.7. Define Mitosis and enlist its different stages? **(20)**

Q.8. Write short notes on **ANY TWO** of the following: **(10+10)**

(a) What is water logging? Give its causes and reclamation?

(b) What is transpiration and also give its various types.

(c) Elaborate the mechanism of stomatal movement?

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