QPC: RJ20BSCAG021

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# GIET UNIVERSITY, GUNUPUR – 765022

## B. Sc (AG) (First Semester) Examinations, June – 2021

## BB-111 – Introductory Biology

Time: 2 hrs | Maximum : 50 Marks

The figures in the right hand margin indicate marks.

### PART – A

**Q.1. Fill in the blanks with suitable word / figure.** **(0.5 x 10 = 5 Marks)**

a. _____had given the theory of evolution of species by natural selection?
b. _____is known as the father of genetics?
c. The theory of origin of life on earth is proposed by_____
d. The process by which new species develop from the existing species is called_____
e. The naming of the organism in scientific terms is known as_____
f. Considering binomial nomenclature, the parts of scientific names are_____ and _____
g. The longest stage in the cell cycle is _____
h. ———— are the non-essential parts of a flower
i. Four long and two short stamens are found in_____
j. Radial symmetry is found in the flowers of_____

**Q. 2. Define (or) Explain the following in one or two sentences.** **(1 x 5 = 5 Marks)**

a. Classification

b. Mitosis

c. Meiosis

d. Interphase

e. Root

**Q3. Choose the most appropriate answer from the following** **0.5 x 10 = 5 Marks)**

a. The best stage at which the total number of chromosomes can be counted in any species is
(i) Telophase (ii) Metaphase
(iii)Late anaphase (iv) Late prophase

b. This structure tends to vanish always during meiosis and mitosis
(i) Plastids (ii) Plasma membrane
(iii) Nucleolus and nuclear membrane (iv)All of these

c. Centrosome duplication takes place in this phase
(i) S phase (ii) G1 phase
(iii) G0 phase (iv) M phase

d. Leaves become modified into spines in
(i)Opuntia (ii) Onion
(iii)Silk cotton (iv)Pea

e. Geocarpic fruits are formed in

(i) Onion (ii) Carrot
(iii) Groundnut (iv) Watermelon

f Testa of seed develops from
(i) Hilum (ii)Funicle
(iii) Ovary wall (iv) Outer integument

g An enzyme which can stimulate the germination of barley seeds is
(i)Invertase (ii) Lipase
(iii) Protease (iv) α-amylase

h During the germination of seeds, the seed coat ruptures due to
(i) massive imbibition of water (ii) differentiation of cotyledons
(iii) a sudden increase in cell division (iv) massive glycolysis in cotyledons and endosperm

i The proteinaceous part of maize endosperm is
(i) Peripheral layer (ii) scutellum
(iii)Apophysis (iv)Aleurone layer

j One of these gases is required for the germination of pea seeds
(i) nitrogen (ii) oxygen
(iii) water vapours (iv) hydrogen

**Q4. Write True or False against each statement (0.5 x 10 = 5 Marks)**

a. Seed dormancy allows the plants to overcome unfavourable climatic conditions
b. The protective covering over radical during the germination of seeds is Coleorhiza
c. ABA can induce seed dormancy
d. An albuminous seed showing hypogeal germination is Mazie
e. Vexillum is found in Papilionaceae
f. When there is an increase in the condensation of chromatin during the process of cell division Differentiation of euchromatin& heterochromatin increases
g. Individual chromosomes become distinct through a light microscope during this mitotic stage Prophase
h. Prophase condition is necessary for a cell to qualify through the G2 checkpoint
i. The characteristic of anaphase of mitosis is the separation of the sister chromatids
j. The best stage at which the total number of chromosomes can be counted in any species is Meataphase

## PART – B

**Attempt *ANY FIVE* questions. All question carries equal marks (6 x 5 = 30 Marks)**

5. Write about origin of life
6. Describe evolution and eugenics
7. Write about classification
8. Explain mitosis
9. Explain meiosis
10. Write about seed germination

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