

[Eng]

SARDAR PATEL UNIVERSITY**B. Sc. (I Semester) Examination****Wednesday, 16th November - 2016 : 10.00 am - 12.00 pm****US01CBIO02 - Biology : Plant Cytology and Taxonomy****Total Marks : 70**

- Notes :** (1) There are total six (06) questions.
 (2) Write answer of each new question from new page.
 (3) Illustrate your answers with neat and labeled diagrams.
 (4) A figure on right side shown is the marks for question.

Q:1 Multiple choice questions. (MCQ) (10)

(Write complete question with appropriate answer in your answer book. If only question number and/or option number is mentioned in answer sheet, in that case it will be considered as incomplete answer and will not be assessed)

1. In Latin word 'virus' means
 (a) Poisonous fluid (b) Proteinaceous fluid (c) free-living fluid (d) None of these option
2. The long, twisted spiral shaped bacteria are called
 (a) Cocci (b) Bacilli (c) Spirilli (d) Vibrio
3. The type of Ribosomes in eukaryotic cell is _____
 (a) 08 S (b) 80 S (c) 88 S (d) 78 S
4. Lysosomes are also known as _____.
 (a) Storage bag (b) Suicidal bag (c) Energy bag (d) cellular bag
5. In Hypogynous flower, position of ovary is _____.
 (a) Superior (b) Inferior (c) Lateral (d) None of these option
6. Unit of corolla is _____.
 (a) Sepal (b) Petal (c) Stamen (d) Carpel
7. When two leaves arises from each node, phyllotaxy is known as _____.
 (a) Alternate (b) Opposite (c) Whorled (d) None of these option
8. Transfusion tissue is present in _____ of Cycas.
 (a) Root (b) Stem (c) Leaflet (d) Male cone
9. Monadelphous stamen is characteristic of _____ family.
 (a) Malvaceae (b) Cucurbitaceae (c) Solanaceae (d) Rubiaceae
10. *Capsicum annum* is scientific name of
 (a) Chilli (b) Lichi (c) Sago (d) Cucumber

Q:2 Answer following questions in Short. (Any 10) (20)

1. What are Viroids?
2. Write chemical composition of gram positive bacterial cell wall.
3. Write name of any two plant diseases caused by bacteria.
4. Write any two differences between plant and animal cell.
5. What is middle lamella?
6. What is happening during G1 phase?
7. What is whorled phyllotaxy?
8. Sketch and label typical flower.
9. What is complete flower?
10. Write any two xerophytic adaptations of Cycas leaf.
11. Write scientific name and family of China rose plant.
12. Write scientific name and family of Tobacco plant.

①

C.P.T.O.)

- Q:3 (a) Describe Properties of viruses as living and non-living object. (05)
(b) Describe the Griffith experiment-Transformation. (05)
OR
(a) What is Bacteriophage? Describe its structure with labeled diagram. (05)
(b) Classify bacteria based on shape and flagella arrangement. (05)
- Q:4 Describe different stages of Mitosis with necessary diagrams. (10)
OR
(a) Write the functions of endoplasmic reticulum. (05)
(b) Describe the ultra structure of Golgi apparatus with labeled diagram. (05)
- Q:5 Describe the types of palmate and pinnate compound leaf with examples and draw necessary figures. (10)
OR
(a) Describe the types of Cymose inflorescences with necessary diagram. (05)
(b) Describe Cyathium and Verticillaster inflorescences and draw necessary diagram. (05)
- Q:6 (a) Cycas: male strobilus (male cone). (05)
(b) Describe economic importance of Bitter gourd and Cucumber. (05)
OR
(a) Describe structure of Cycas ovule (Megasporangium) with labeled diagram. (05)
(b) Describe calyx, corolla, androecium and gynoecium of family Solanaceae. (05)

