

SARDAR PATEL UNIVERSITY
M. Sc (Int.) Biotechnology : First Semester Examination
Friday, 7th December, 2012
Time : 10.30 am to 1.30 pm
Sub : PS01CIGB05 : Plant Sciences

Total Marks : 70

Q-1 Give the answers by choosing appropriate option.

[8 X 1]

- (1) The shape of chloroplast found in spirogyra
(a) Spiral (b) Flat (c) Cup shaped (d) None of these
- (2) Which of the following is an example of Bryophyta?
(a) Yeast (b) *E.coli* (c) *Oscillatoria* (d) *Riccia*
- (3) The scientific name of Neem is...
(a) *Adhatoda vasica* (b) *Calotropis procera* (c) *Withania somnifera*
(d) None of these
- (4) *Hibiscus rosa sinensis* belongs to family
(a) Apocynaceae (b) Malvaceae (c) Cucurbitaceae (d) None of these
- (5) The pollination takes place with the help of insects is known as...
(a) Hydrophily (b) Entomophily (c) Chiropterophily (d) Ornithophily
- (6) When pollen tube enters through integuments, it is called as...
(a) Mesogamy (b) Porogamy (c) Chalazogamy (d) Isogamy
- (7) In monocot root, the type of vascular bundle is
(a) Collateral (b) Conjoint (c) Radial (d) None of these
- (8) In dominant complementary gene action, the phenotypic ratio of 9:3:3:1 is modified to...
(a) 9:3:4 (b) 9:7 (c) 12:3:1 (d) 15:1

Q-2 Answer the following questions in short. (Any seven)

[7 X 2]

- (1) Draw the life cycle of Spirogyra.
- (2) Explain *Cycas* megasporophyll.

- (3) Enlist important medicinal properties of *Adhatoda vasaka*.
- (4) Briefly explain morphology of Mucor.
- (5) Explain rhizome with one example.
- (6) Differentiate self and cross pollination.
- (7) Explain incomplete dominance with example.
- (8) Write a note on Parenchyma.
- (9) What is Lichen? Write about its types.
- Q-3 (a) Give an outline of Eichler's system of classification. Add a note on economic importance of Algae. [06]
- (b) Write a detail note on Riccia antheridium and archegonium. [06]
- Or**
- (b) Explain Scalariform conjugation in Spirogyra. [06]
- Q-4 (a) Write a short note on artificial vegetative reproduction. [06]
- (b) Discuss the identifying characters and economic importance of the family Cucurbitaceae. [06]
- Or**
- (b) Write scientific name and medicinal properties of Aakdo. [06]
- Q-5 (a) Write a note on cross pollination. [06]
- (b) Discuss different types of ovule with suitable diagrams. [06]
- Or**
- (b) Describe the process of megasporogenesis and megagametogenesis in detail. [06]
- Q-6 (a) Differentiate dominance and epistasis. Explain recessive complementary gene action with example. [06]
- (b) Explain the secondary growth in *Dracaena* stem with neat and labeled diagram. [06]
- Or**
- (b) Write a short note on Xylem tissue. [06]
