

**M.Sc(Botany) Semester - 3 (CBCS) Examination****Oct/Nov. - 2018****BOT 313: Plant Anatomy, Morphogenesis and Embryology  
(CORE)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
  2. Figures to the right indicate marks.
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**Q.1 Answer the following (any 7) 14**

1. Define the term 'Suspensor'
2. In the study of embryology, what do you mean by 'Epiblast'
3. Plant cell wall is made up of which materials ?
4. State briefly the Apical cell theory for root in plants
5. What do you mean by Axillary bud?
6. What is double fertilization?
7. What is the calyptra? And where it is found
8. What is the difference between gametophyte and sporophytes?
9. What is the function of 'Tapetum'?
10. Which tissues of leaf contains chloroplasts?

**Q.2 Answer the following (any two) 14**

1. What are permanent tissues ? Explain in detail different types of Permanent tissues.
2. Write a note on different types of secretory tissues
3. Explain the organization of plant root apex

**Q.3 Answer the following 14**

1. State the pattern of morphogenesis in plants
2. Describe anatomical features of monocotyledonous plants

**OR****Q.3 Answer the following 14**

1. Write a detailed note on secondary growth seen in plants
2. Explain the affects of light and temperature on morphogenesis

**Q.4 Answer the following (any two) 14**

1. State different stages of embryogenesis in plants
2. Write a note on various types of endosperm
3. Explain the process of fertilization

**Q.5 Answer the following (any two) 14**

1. Explain briefly Polyembryony
2. State the importance of embryology in relation to taxonomy
3. Write a brief note on microsporangium
4. Write a detailed note on Apomixis

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