

Register Number:

Date: /04/2020

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27**

**M.Sc. BOTANY - II SEMESTER**

**SEMESTER EXAMINATION: APRIL 2020**

**BO 8218 – PLANT MORPHOGENESIS AND EMBRYOLOGY**

**Time - 2 ½ Hours Max. Marks - 70**

**This paper contains ONE printed page and THREE parts**

**Draw diagrams wherever necessary**

**A. Define any TEN of the following 10x2=20**

1. Field concepts

2. Sporopollenin

3. Fibonacci series

4. Tenuinucellate ovule

5.Telome theory

6. Cantact parastichy

7. MADS box genes

8. Filiform apparatus

9.Callose plug

10. Nemec phenomenon

11. Heterofertilization

12. Coenomegaspore

**B. Write critical notes on any FIVE of the following 5x6=30**

13. Apendicular and axial theories of inferior ovary

14. Polarity in *Fucus* zygote

15. Vascular differentiation & role of growth hormones in this process

16. Anther tapetum: types and functions

17. Sperm dimorphism and Male germ unit

18. Pollen germination *in vivo* and entry of pollen tube into ES

19. Describe: a) Endosperm haustoria; b) Chimeral embryos

**C. Give a comprehensive account of any TWO of the following 2x10=20**

20. Physiology and biochemistry of self incompatibility and biological significance

21. a) Serial evocation of genes in flower development in *Arabidopsis*

 b) Ultra structure and physiology of megasporogenesis

22. a) Embryo endosperm relationship

b) Embryogeny in *Capsella*