T.Y.B.SC. SEM – VI (2014 Course): SUMMER - 2019 SUBJECT: BOTANY: BIOLOGY OF SEED PLANTS (GYMNOSPERMS AND PALEOBOTANY)

Time: 03.00 PM To 05.00 PM Day : Wednesday Date : 10/04/2019 Max. Marks: 40 S-2019-1028 N.B. 1) All questions are **COMPULSORY**. Figures to the RIGHT indicate FULL marks. 2) 3) Draw neat and labeled diagrams WHEREVER necessary. **Q.1** Attempt ANY TWO of the following. (10)Describe affinities of *Gnetum* with Angiosperms. **b)** Give morphological characters of *Cycadeoidea*. c) Describe female cone of Zamia. Attempt ANY TWO of the following. Q.2 (10)a) Explain female cone of *Pinus*. **b)** Describe coralloid roots of *Cycas*. c) Enlist general characters of Gymnosperms. Q.3 Attempt ANY TWO of the following. (10)a) Give external morphology of *Thuja*. Explain pollination in Cycas. Describe male cone of *Gnetum*. 0.4 Attempt ANY FIVE of the following. (10)Give anatomical features of Cycas leaflet. a) Explain pollination in *Pinus*. b) Give distribution of Gymnosperms in India. c) Enlist economic importance of Gymnosperms. d) Give structure of ovule in Cycas. e) What is mycorrhizal roots of *Pinus*. f) Give types of needles in *Pinus* with suitable examples of species.