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**V—62—2017**

**FACULTY OF SCIENCE**

**B.Sc. (Second Year) (Fourth Semester) EXAMINATION**

**OCTOBER/NOVEMBER, 2017**

**BOTANY**

**Paper VIII**

**(Gymnosperms and Paleobotany)**

**(MCQ + Theory)**

**(Friday, 10-11-2017)**

**Time : 2.00 p.m. to 4.00 p.m.**

*Time—2 Hours*

*Maximum Marks—40*

- N.B. :—*
- (i) Attempt *All* questions.
  - (ii) *All* questions carry equal marks.
  - (iii) Choose the correct answer for MCQ.

**MCQ**

10

1. (1) In gymnosperms phloem lacks .....
- (A) Vessels
  - (B) Fibre
  - (C) Companion cell
  - (D) Tracheids
- (2) The ovules are naked in .....
- (A) Angiosperms
  - (B) Gymnosperms
  - (C) Pteridophytes
  - (D) Bryophytes
- (3) Cycas is .....
- (A) Monoecious and seed bearing
  - (B) Seedless monoecious
  - (C) Dioecious seedbearing
  - (D) Seedless dioecious

P.T.O.

- (4) Diploxylic V.B. are found in .....  
(A) Funaria axis (B) Dryopteris rhizome  
(C) Cycas rachis (D) Marsilea
- (5) The ovuliferous scales are found in the Megasporophyll of .....  
(A) Pinus (B) Cycas  
(C) Gnetum (D) Ginkgo
- (6) Foliage leaves are acicular in .....  
(A) Ginkgo (B) Cycas  
(C) Gnetum (D) Pinus
- (7) Gnetum gnemon is a .....  
(A) Herb (B) Large tree  
(C) Small tree (D) Runner
- (8) Phyllotaxy in Gnetum is .....  
(A) Alternate (B) Spiral  
(C) Opposite decussate (D) Opposite superposed
- (9) Lyginopteris oldhamia stem is discovered by .....  
(A) Mendel (B) Potonie  
(C) Engler (D) Linnaeus
- (10) Archeozoic era regarded as .....  
(A) Era of ancient life (B) Era of modern life  
(C) Era of primitive life (D) Era of early life

### Theory

2. With the help of labelled diagram describe the L.S. of cycas ovule. 10

Or

Write in brief on :

- (a) Xerophytic characters of cycas pinna.  
(b) Primary growth in cycas stem.

3. Define secondary growth. Describe secondary growth in pinus stem. 10

Or

Write in brief on :

- (a) T.S. of pinus needle
- (b) Microspore of pinus.

4. Describe the structure of male and female cone of Gnetum. 10

Or

Write in brief on :

- (a) Lyginopteris oldhamia stem
- (b) Geological time scale.