

KERALA AGRICULTURAL UNIVERSITY

B.Sc (Hons.) Forestry Degree Programme 2015 Admission

IInd Semester Final Examination-August-2016

Cat. No: Wosc. 1202

Marks: 50.00

Title: Wood Anatomy (2+1)

Time: 2 hours

I Answer all the questions

(10 x 1 =10)

1. Gum canal occur in members of the family.
a) Malvaceae b) Combretaceae c) Dipterocarpaceae d) Verbenaceae
2. Over 90 per cent of the total volume of coniferous wood is constituted by _____
a) Vessels b) Parenchyma c) Rays d) Tracheids
3. _____ section passes through the trunk axis at a certain distance from the pith
a) Radial b) cross c) Tangential d) None of the above

Fill up the blanks.

4. _____ are called as soft tissues.
5. The largest research wood collection in the world is housed at _____.
a) Oxford University, UK b) FRI Dehra Dun c) Centre for Wood Anatomy Research, Madison, USA d) National Herbarium Nederland, The Netherlands.
6. An example of storied rays (ripple marks) in hardwood is _____.
a) *Tectona grandis* b) *Pterocarpus marsupium* c) *Mangifera indica* d) *Terminalia crenulata*
7. Piceoid pitting is common in the conifer species of _____.
a) Pine b) Cedrus sp c) Redwood d) Spruce
8. An example of long-fibred raw material for pulp and paper industry is _____.
a) Eucalyptus b) Bamboo c) Silver oak d) Acacia
9. In teak the vessel grouping is in _____ pattern
a) Radial multiples b) Solitary to 2-3 c) oblique d) None of the above.
10. Sandal (*Santalum album*) is a ring-porous species
a) True b) False

II Write short notes on ANY FIVE

(5 x 2 =10)

1. Differentiate between discontinuous ring and a false ring
2. Differentiate between apotracheal and paratracheal parenchyma. Give Examples.
3. List the anatomical differences in the wood of softwoods and hardwoods.
4. Draw a cross-sectional view of an aspirated bordered pit pair. Clearly show and label the position of the border, torus, margo, aperture
5. Characteristics of tension wood.
6. Xylarium and its importance in wood anatomy
7. Ray features in dicot wood and its diagnostic significance.

III. Explain ANY FIVE of the following

(5 x 4 =20)

1. Pulp wood properties of plantation trees
2. Cross field pitting in conifers How it aids in identification
3. Anatomy of teak wood
4. Importance of specific gravity of wood in tree breeding programme
5. Briefly describe chemical composition of the cell wall of normal wood
6. Describe the anatomical features for the identification of *Dalbergia latifolia* wood
7. Vessels arrangements and groups in tropical hardwoods as seen in transverse view for the purpose of wood identification.

IV. Write essay on ANY ONE

(1 x 10=10)

1. Formation of reaction wood in forest trees and its implications on wood quality
2. Narrate the important macroscopic features of wood