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Test Registration No. _____



The Maharaja Sayajirao University of Baroda
Faculty of Science

M.Sc. ENTRANCE EXAMINATION

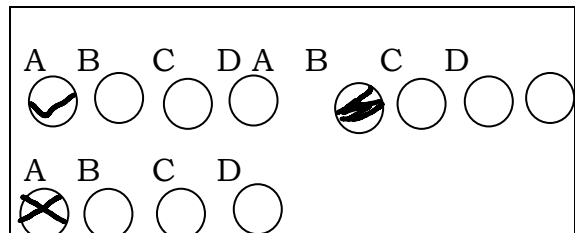
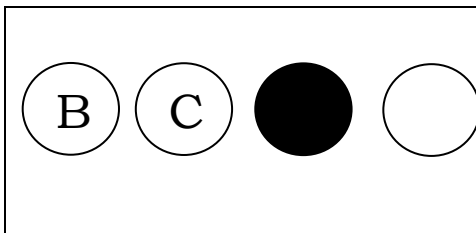
SUBJECT: Botany
DAY: Monday

TIME : 10.00-11.30 AM
DATE : 4th July 2022

Important Instructions:

1. This test booklet is to be opened only when instructed by the invigilators to do so.
2. This booklet carries 100 questions in 8 printed pages. All carry equal marks.
3. For every correct answer, candidate will earn 1 mark, for every wrong answer 25% mark will be deducted.
4. Test Registration Number must be entered correctly in the OMR answer sheet, as advised by the invigilators. The Question Booklet code (A/B/C/D) must also be marked on the OMR answer sheet (if not printed already) as instructed.
5. Answers must be marked in the OMR answer sheet using a black or dark blue ball point pen only. The circle should be filled in completely, leaving no gaps.
6. Gadgets (Mobile phones, pagers, ear phones, music players, calculators smart watches etc.) are strictly prohibited in the exam hall. If any candidate is found in possession of any of these at his/her exam seat, he/she is liable to be disqualified.
7. In case of tie in the marks the merit will be considered based on total marks in qualifying examination.

Correct way of marking answer: Incorrect way of marking answer:



Invigilator's Signature: _____

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

Department of Botany

M.Sc. ENTRANCE EXAMINATIONS 2022

Day: Monday

Date: 4th July 2022

Time: 10 am – 11.30 am

Marks: 100

Note: 1. Write your answers in the given OMR sheet.

2. There is negative marking in this examination. For each wrong answer 0.25 marks will be deducted.

1x100=100 Marks

1. Presence of gynophoric flower with 6 to many stamens is a character of
 - a) Sterculiaceae
 - b) Mimosaceae
 - c) Capparidaceae
 - d) Tiliaceae
2. Meliaceae is distinguished from related taxa by
 - a) Stamina tube
 - b) Lack of resin producing ducts
 - c) discoid stigma
 - d) All the above
3. Family Sterculiaceae is distinguished by usually monadelphous stamens that differ from Malvaceae in being
 - a) Monotheous stamens
 - b) Petaloid stamens
 - c) Ditheous stamens
 - d) None of the above
4. Some plants renowned for survival in harsh semi-desert and can grow in sand or even on rocks
 - a) Conifers
 - b) Ptreidosperms
 - c) Cycads
 - d) Ginkgoales
5. _____ the 'plant of immortality' by the ancient Egyptians, was used for its healing properties since time immemorial. It is an ingredient in many cosmetics because it heals, moisturizes, and softens skin. Simply cut one of the leaves to easily extract the soothing gel.
 - a) *Lawsoniainermis*
 - b) *Azadirachtaindica*
 - c) *Aloe barbadensis*
 - d) *Artemisia scoparia*
6. Early Life on the mother earth is always considered to be
 - a) Chemical
 - b) Physical
 - c) Physiological
 - d) Social
7. Sydney fox has described the evolution of membrane with the help of
 - a) Chemicals
 - b) physical
 - c) coacervates
 - d) protenoids
8. Use and disuse theory can be explained by the examples of
 - a) Development of muscles
 - b) development of intelligence
 - c) Elongation of neck of Giraffe
 - d) chopping the tails of rats
9. With the help of the immunoassay studies we are able to gather information for
 - a) Evolution
 - b) Systematics
 - c) Species
 - d) Life

24. What type of gametes will form by genotype RrYy
 a) RY,Ry,rY,ry b) RY,Ry,ry,ry c) Ry,Ry,Yy,ry d) Rr,RR,Yy,YY
25. Who is the father of Tissue culture?
 a) Bonner b) Haberlandt c) Laibach d) Gautheret
26. Cybrids are produced by_____.
 a) Fusion of two different nuclei from two different sources
 b) Fusion of two same nuclei from same species
 c) Nucleus from one species but cytoplasm from both species
 d) None of the above
27. Which vector is mostly used for transgenic plant production ?
 a) Plasmid b) cosmid c) Phasmid d) Agrobacterium
28. Organogenesis is
 a) Formation of callus tissue b) Formation of root and shoot on callus tissue
 c) both (a) and (b) d) genesis of organ
29. Opposite decussate phyllotaxy is found in_____.
 a) Calotropis b) Mango c) Hibiscus d) Nerium
30. Flowers are sessile in _----- inflorescence
 a) Corymb b) Raceme c) Umbel d) Spike
31. Unisexual flowers are found in family
 a) Malvaceae b) Solanaceae c) Cucurbitaceae d) None of these
32. Placentation in Cucurbitaceae is
 a) Parietal b) Axile c) Basal d) Marginal
33. RNA polymerase II is involved in the transcription of
 a) t RNA genes b) r RNA genes c) all protein genes d) sn RNA genes
34. One gene one enzyme hypothesis was proposed by
 a) Lederberg b) Beadle and Tatum c) Garrod d) Francis crick
35. When two or more fruits develop from a single flower they are called.....
 a) Composite fruits b) Aggregate fruits
 c) Edible fruits d) All the above
36. is defined as maximum displacement of wave from equilibrium, represented by crest and troughs of curvature produced.
 a) Amplitude b) Wave frequency
 c) Refractive index d) Refraction
37. The change of position involving inversion and twisting of xylem strands from exarch to endarch type is known as...
 a) Root-stem translocation b) Root-stem transformation
 c) Root-stem transition d) All the above
38. In *Cucurbita pepo* fruit shape is controlled by
 a) dominant genes b) recessive genes c) duplicate genes d) epistasis
39. Beta vulgaris the food is stored in napiform root a underground structure then can you explain the position of preparation of food?
 a) shoot b) leaves c) stem d) flower

74. The organism *Trichoderma* is used as
- a) Phosphate fertilizer c) Growth hormone
b) Antagonist d) Edible fungus
75. In absence of specific host, if a pathogen starts growing on other alternative host for its survival, such pathogen is called as
- a) Facultative parasite b) Obligate parasite
c) Pseudo-parasite d) Nonspecific parasite
76. Due to the presence of pathogen, when a cell fails to carry out its normal function and dies. Such state is said to be..
- a) Abnormal b) Symptomatic c) Asymptomatic d) Diseased
77. Haploid infect alternative host barberry
- a) Urediospore b) Aecidiospore c) Teleutospore d) basidiospores
78. The presence of a _____ type of pit is especially characteristics of most of Coniferales.
- a) Torus b) Simple pit c) Bordered pit d) Vestured pi
79. _____ is responsible for preventing the folding of the cellulose microfibrils in plant cell wall.
- a) Lipids b) Lignin c) Hemicelluloses d) protein
80. One of the main component of cell wall is cellulose ad the molecule of cellulose consist of long chain of _____ residues.
- a) Glucose b) lipids c) phospholipids d) polysaccharids
81. The protective layer developed during the secondary growth of the stem is called...
- a) Epidermis b) Periderm c) Rhizodermis d) Phellogen
82. The change from meristematic tissue to permanent tissue is called...
- a) Differentiation. b) Self-perpetuating
c) Photosynthesis. d) Cell division
83. Phloem that is embedded within the secondary xylem is called _____ phloem.
- a) Internal b) Intraxylary c) Interxylary d) Medullary
84. Movement of water and minerals into the vascular column of a root is controlled by ...
- a) Stomata b) Spongy mesophyll cells c) Vascular cambium d) Endodermis
85. _____ among the following would be having the lowest intrinsic rate of growth 'r'.
- a) Large trees b) grasses c) bacteria d) unicellular alage
86. Which biome is characterized by low temperature and low precipitation?
- a) Savannah b) Subtropical desert c) Temperate grassland d) Tundra
87. The ocean currents move in a clockwise manner in the _____.
- a) Northern Hemisphere b) Southern Hemisphere c) Antarctic ocean d) Equator
88. Which plant hormone was also initially known as Dormin?
- a) Kinetin b) Dihydrozeatin c) ABA d) Zeatin
89. Which of the following enzyme is not involved in the C₃ cycle?
- a) RUBISCO b) Aldolase
c) fructose 1,6, biphosphatase d) Amylase

