

# ରେନେସାଁ of Aliah

Question Booklet No.	Question Booklet Series: A
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## AUAT – 2019 2-Year M.Sc. in Botany (39) (TEST BASED ON MCQ)

Full Marks: 100

Duration: 2 Hours

Roll No. of the Candidate: \_\_\_\_\_

Date of Examination: \_\_\_\_\_

Name of Examination Centre: \_\_\_\_\_

Signature of the Candidate: \_\_\_\_\_

Signature of the Invigilator on  
Verification

### IMPORTANT INSTRUCTIONS

Candidates should read the below instructions carefully and follow them accordingly.

1. The Question Booklet has paper seal pasted on it. Please do NOT open the Question Booklet until you are asked to do so by the Invigilator.
2. The Candidates must check immediately after breaking the seal that the Question Booklet contains 100 multiple choice questions in two parts (Part – I and Part – II).
3. Answer of questions of Part – I and Part – II both will have to be given on the *OMR Answer Sheet* provided for this purpose. Fill up the necessary fields that are intended for you by writing and/ or shading appropriately. Otherwise the *OMR Answer Sheet* cannot be evaluated and will be liable to be rejected. Question numbers progress from 1 to 100 continuously with alternative answers being shown as (a), (b), (c) and (d) for each question. Record your response by completely darkening the corresponding bubble. While responding, you should consider the best alternative answer and shade only one bubble with **black/ blue ball point pen only**. For each correct response you will be awarded 1 mark. There will be negative marking for wrong responses. For each wrong response,  $-0.25$  will be awarded. Multiple responses against one MCQ will be treated as a wrong response.
4. On leaving the examination hall, candidates must submit the OMR Answer Sheet. They are allowed to keep the Question Booklet with them.
5. OMR answer Sheets will be processed by electronic means. Any untoward/ irrelevant remarks, folding or putting stray notes on the answer sheet, any damage to the answer sheet will lead to the rejection of the same and the sole liability shall remain with the candidate.
6. Rough Work may be done at the end of the Question Booklet.
7. No Candidate will be allowed to leave the examination hall before 60 minutes of the commencement of examination. Candidates leaving the examination hall before conclusions of the examination will not be allowed to take the Question Booklet with them while going outside the examination hall.
8. Use of any Electronic device like Mobile, Programmable Calculator etc. is strictly prohibited.

# ରେନେସାଁ of Aliah

**(Part I: Core Subject)**

1. To which family does sunflower belong ?
- (a) Poaceae
  - (b) Fabaceae
  - (c) Asteraceae
  - (d) Euphorbiaceae
2. Before a carbohydrate is utilized as an energy source, it gets first converted into
- (a) Oligosaccharide
  - (b) Triose sugars
  - (c) Monosaccharide
  - (d) Disaccharide
3. Central National Herbarium is located at
- (a) Dehra Dun
  - (b) Howrah
  - (c) Lucknow
  - (d) Coimbatore
4. Heterocysts are mainly related to
- (a) photosynthesis
  - (b) sexual reproduction
  - (c) nitrogen fixation
  - (d) mucilage production
5. In Gymnosperms, the female gametophyte develops from the
- (a) Nucellus cells
  - (b) Haploid megasporangium
  - (c) Haploid megasporangium
  - (d) Diploid megasporangium
6. Hyaline cells of leaves and retort cells facilitate high water holding capacity of the gametophore in
- (a) *Sphagnum*
  - (b) *Funaria*
  - (c) *Pellia*
  - (d) *Porella*
7. Soilless cultivation of plants is known as
- (a) Arboriculture
  - (b) Horticulture
  - (c) Hydroponics
  - (d) Olericulture
8. Which of the following is not a member of Poaceae?
- (a) *Hordeum vulgare*
  - (b) *Triticum aestivum*
  - (c) *Oryza sativa*
  - (d) *Mangifera indica*
9. Which of the following bond does not occur in proteins
- (a) Peptide bond
  - (b) Ionic bonds
  - (c) Glycosidic linkage
  - (d) Hydrogen bond
10. An obligate parasite can only grow on
- (a) Living tissue
  - (b) Dead tissue
  - (c) Living or dead tissue
  - (d) Rotten tissue
11. The fruiting body in *Agaricus* is
- (a) Conidiophore
  - (b) Basidiocarp
  - (c) Sporangiophore
  - (d) Ascocarp
12. In TCA/Krebs cycle the six carbon compound formed by the combination of acetyl CoA and
- (a) Malic acid
  - (b) Citric acid
  - (c) Oxaloacetic acid
  - (d) Gibberellic acid
13. The enzyme responsible for the reduction of nitrogen into ammonia during biological nitrogen fixation is
- (a) Nitrogenase
  - (b) Nitrate reductase
  - (c) Dinitrogenase
  - (d) Hydrogenase

14. Which one of the following features of *Anthoceros* indicates its algal ancestry?
- Single chloroplast with a pyrenoid in each cell
  - Symbiotic association with *Nostoc*
  - Presence of slime pores
  - Presence of stomata in the capsule wall
15. Hormogonia are
- Multicellular fragments of filaments which serve in vegetative reproduction of some blue-green algae
  - Multicellular fragments of filaments which serve in vegetative reproduction of some green algae.
  - A chain of spherical cells with thickened walls which serve in vegetative reproduction of some blue-green algae.
  - A chain of spherical cells with thickened walls which serve in vegetative reproduction of some green algae.
16. Balloon like outgrowth from axial parenchyma cells that extends through a pit cavity in a vessel wall that enters into a vessel element blocking the vessel lumen is called
- Phellogen
  - Histogram
  - Tyloses
  - Tunica
17. Which of the following do not contain nucleic acids
- Nucleus
  - Ribosomes
  - Mitochondria
  - Endoplasmic reticulum
18. Disaccharides consist of two monosaccharides joined covalently by an
- O-glycosidic bond
  - Phosphodiester bond
  - Peptide bond
  - Hydrogen bond
19. Which of the following is not a storage polysaccharide?
- Starch
  - Inulin
  - Cellobiose
  - Amylose
20. Two anticancer compounds *Vinblastine* and *Vin-cristine* isolated from a well known medicinal plant called
- Taxus brevifolia*
  - Veronica officinalis*
  - Withania somnifera*
  - Catharanthus roseus*
21. Fucoxanthin pigment is found in
- Red algae
  - Green algae
  - Brown algae
  - Blue-green algae
22. The closed ascocarp is termed
- Apothecium
  - Cleistothecium
  - Peritheciium
  - Hysterothecium
23. A type of stele in which groups of xylem surrounded by phloem are arranged around central pith, with closely spaced leaf gaps, is called
- Protostele
  - Dictyostele
  - Plectostele
  - Eustele
24. Monadelphous stamens occur in
- Malvaceae
  - Euphorbiaceae
  - Fabaceae
  - Apocynaceae

25. Double helical structure of DNA was discovered by
- Emil Fischer
  - Watson and Crick
  - Gregor Mendel
  - Beadle and Tatum
26. Cellular organelles containing hydrolytic enzymes are called
- Lysosomes
  - Peroxisomes
  - Mesosomes
  - Endoplasmic reticulum
27. Agar-Agar is mainly obtained from
- Nostoc* and *Anabaena*
  - Gracillaria* and *Gelidium*
  - Sargassum* and *Laminaria*
  - Polysiphonia* and *Fucus*
28. The genus *Laminaria* used to make iodine belongs to
- Algae
  - Fungi
  - Bryophyte
  - Pteridophyte
29. Which one of the following is a fossil?
- Selaginella*
  - Rhynia*
  - Pteris*
  - Adiantum*
30. Which one of the following does not have a pith?
- Protostele
  - Dictyostele
  - Solenostele
  - Siphonostele
31. Root nodules of legumes contain a pink pigment called as
- Leghaemoglobin
  - Oxyhaemoglobin
  - Nodhaemoglobin
  - Rhizohaemoglobin
32. A common adaptation of aquatic plants is the formation of
- Chlorenchyma
  - Aerenchyma
  - Colenchyma
  - Sclerenchyma
33. Potato is a modified
- Root
  - Leaf
  - Stem
  - Fruit
34. In which meiotic phase does nucleolus dissolve?
- Prophase
  - Metaphase
  - Anaphase
  - Telophase
35. The swollen tip of a hypha or germ tube that facilitates attachment and penetration of the host by a fungus is called-
- Appressorium
  - Apothecium
  - Haustorium
  - Ascostroma
36. Members of which family have axile placentation?
- Fabaceae
  - Asteraceae
  - Cucurbitaceae
  - Malvaceae
37. Cylindrical or bar-like structures extending across the lumen of a tracheid from one tangential wall to another are known as
- Verrucae
  - Strand tracheids
  - Trabeculae
  - Ray tracheids

38. Term applied to plants having separate male and female plants is
- Monoecious
  - Polygamous
  - Monogamous
  - Dioecious
39. Which among the following families has epipetalous stamens?
- Poaceae
  - Malvaceae
  - Acanthaceae
  - Fabaceae
40. In C4 plants, which enzyme performs the critical reaction of fixing carbon dioxide to produce C4 acid?
- PEP carboxylase
  - RuBP carboxylase
  - RuBP decarboxylase
  - PEP decarboxylase
41. Plants growing in swampy areas have roots which grow vertically upwards from the ground and these are called as
- Fibrous roots
  - Adventitious roots
  - Pneumatophores
  - Prop roots
42. RUBISCO is an enzyme involved in
- Respiration
  - Photosynthesis
  - Water transport
  - $\beta$ -oxidation of fatty acids
43. ICBN stands for:
- International Code of nomenclature of Algae, Fungi and Plants
  - International Code of Biological Nomenclature
  - International Code of Nomenclature of Cultivated Plants
  - International Code of Botanical Nomenclature
44. To which family does *Gossypium*, the cotton yielding plant belong to?
- Fabaceae
  - Malvaceae
  - Rosaceae
  - Poaceae
45. An organism in the Deuteromycota has all the following except
- Asexual spores
  - Absorptive nutrition
  - Ascospores, basidiospores or zygospores
  - A nucleus
46. Source of a potential biopesticide is
- Aspergillus*
  - Curvularia*
  - Penicillium*
  - Trichoderma*
47. Cystoliths are found in the family
- Solanaceae
  - Rosaceae
  - Acanthaceae
  - Poaceae
48. Flask shaped fruiting body of Ascomycetes is known as
- Cleistothecium
  - Apothecium
  - Sclerotium
  - Perithecium
49. Which among the following is not an edible fungus?
- Agaricus bisporus*
  - Amanita phalloides*
  - Pleurotus sajor-caju*
  - Lentinus edodes*
50. Which of the following is not a fungus?
- Claviceps*
  - Phytophthora*
  - Marsilea*
  - Penicillium*
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51. Which of the following is not a constituent of DNA?
- Ribose sugar
  - Phosphate
  - Thymine
  - Adenine
52. Which of the following is not a disaccharide?
- Maltose
  - Fructose
  - Sucrose
  - Lactose
53. Which of the following is an aquatic fern?
- Salvinia*
  - Pteris*
  - Adiantum*
  - Cyathea*
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54. Which of the following is a fibre yielding plant?
- Corchorus capsularis*
  - Ricinus communis*
  - Arachis hypogea*
  - Oryza sativa*
55. Which one of the following is a bacterial disease?
- Early blight of potato
  - Late blight of potato
  - Angular leaf spot of cotton
  - Black stem rust of wheat
56. The causal organism of the disease responsible for Irish famine is
- Phytophthora infestans*
  - Alternaria solani*
  - Ralstonia solanacearum*
  - Rhizoctonia solani*
57. Nannandrium form is found in
- Chlamydomonas*
  - Volvox*
  - Oedogonium*
  - Chara*
58. Sargasso sea is named after a
- Green alga
  - Brown alga
  - Red alga
  - Cyanobacterium
59. Which one of the following heterotrichous algae grows on rocks or bark?
- Stigeoclonium*
  - Trentepohlia*
  - Cephaleuros*
  - Fritschella*
60. Legume is characteristic of
- Fabaceae
  - Euphorbiaceae
  - Malvaceae
  - Musaceae
61. Gemmae cup are found in-
- Riccia*
  - Anthoceros*
  - Funaria*
  - Marchantia*
62. In which meiotic phase does nuclear envelope form around the chromosomes?
- Prophase
  - Metaphase
  - Anaphase
  - Telophase
63. Type of phyllotaxy where more than 3 leaves are present at a node is known as
- Alternate
  - Whorled
  - Opposite
  - Ternate
64. Molecular technique in which DNA sequences of interest can be amplified is known as
- Southern blotting
  - Polymerase chain reaction
  - Northern blotting
  - Western Blotting

65. Vivipary is

- (a) Seed germination without pollination
- (b) Seed germination inside the fruit while attached to the plant
- (c) Seed germination inside the fruit in a detached fruit
- (d) Seed germination with epiterranean cotyledons

66. Which among the following is not an oil yielding plant?

- (a) *Brassica nigra*
- (b) *Cocos nucifera*
- (c) *Helianthus annuus*
- (d) *Solanum tuberosum*

67. In pitcher plant (*Nepenthes khasiana*), which part is modified to form pitcher?

- (a) Stipule
- (b) Petiole
- (c) Leaf lamina
- (d) Bract

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68. The culturing of plant cells in liquid agitated medium is called

- (a) Aquaponics
- (b) Suspension culture
- (c) Micropropagation
- (d) Hydroponics

69. Which of the following is a hydroxyl group containing amino acid?

- (a) Threonine
- (b) Glycine
- (c) Proline
- (d) Lysine

70. Choose the unicellular algal genus

- (a) *Chara*
- (b) *Chlamydomonas*
- (c) *Laminaria*
- (d) *Polysiphonia*

71. Which of the following is not a reducing sugar

- (a) Fructose
- (b) Glucose
- (c) Ribose
- (d) Sucrose

72. Which of the following is not a fatty acid?

- (a) Oleic acid
- (b) Palmitic acid
- (c) Stearic acid
- (d) Acetic acid

73. Which fungus causes brown spot of rice?

- (a) *Alternaria solani*
- (b) *Pyricularia oryzae*
- (c) *Pytiun ultimum*
- (d) *Helminthosporium oryzae*

74. The gametophyte of moss is

- (a) Capsule
- (b) Seta
- (c) Zygote
- (d) Protonema

75. In aerobic respiration after glycolysis which compound enters TCA cycle?

- (a) Acetyl CoA
- (b) 3-Phosphoglycerate
- (c) Oxaloacetate
- (d) Ribulose-5-Phosphate

76. The process of copying DNA into RNA is called

- (a) Translation
- (b) Transcription
- (c) Transformation
- (d) Recombination

77. Which amino acid is the simplest in structure?

- (a) Glycine
- (b) Methionine
- (c) Tryptophan
- (d) Asparagine

78. T  
a

79. P  
o

81. C  
fc  
o

82. W

83. Tl

84. H

78. The eukaryotic chromosome, in native form, is usually present in
- A-conformation
  - C-conformation
  - B-conformation
  - Z-conformatiaon
79. Phycocyanin and phycoerythrin are characteristics of
- Phaeophyceae
  - Chlorophyceae
  - Bacillariophyceae
  - Rhodophyceae
80. Identify the microorganism capable of inducing hairy root cultures for the synthesis of secondary metabolites
- Bacillus thuringiensis*
  - Agrobacterium tumefaciens*
  - Escherichia coli*
  - Agrobacterium rhizogenes*

**(Part II: General Knowledge, General English & Islamic History and Culture)**

81. Choose the correct option that can be substituted for "A poem of lamentation occasioned by someone's death"
- prologue
  - elegy
  - lyric
  - comedy
82. What are doing — coming Sunday?
- to
  - in
  - on
  - from
- রেনেসাঁ of Aliyah*
83. The Qur'an forbids all of the following EXCEPT
- gambling.
  - earning interest on lending money.
  - drinking alcoholic beverages.
  - making profits through business
84. Headquarter of 'World Bank' is located in
- Geneva, Switzerland
  - Washington DC, United States
  - Berlin, Germany
  - Brussels, Belgium
85. Which city is known as the 'gateway of India'?
- Delhi
  - Mumbai
  - Chennai
  - Kolkata
86. Salat al-Janazah is –
- Islamic funeral prayer
  - a collective obligation upon Muslims
  - performed in congregation to seek pardon for the deceased and all dead Muslims
  - all of the above
87. Longest river in 'Asia' is
- Mahaveli of Srilanka
  - Ganga of India
  - Yangtze of China
  - Huang-He of China
88. What is the state of purity in which all pilgrims enter Makkah for Hajj called?
- Adhaan
  - Ihram
  - Istikhara
  - Ababa

89. The last chapter in the Holy Qur'an is

- (a) Surah Alaq
- (b) Surah Naas
- (c) Surah Fatihah
- (d) Surah Ikhlas

90. Pick out the word opposite in meaning to "Ephemeral":

- (a) Passing
- (b) Sensuous
- (c) Permanent
- (d) Distasteful

91. Kobe Bryant is \_\_\_\_\_ basketball player.

- (a) the
- (b) a *রেনেসাঁ of Aliyah*
- (c) no article
- (d) Either (a), or (b)

92. What is the Night Salah (Prayers) during the month of Ramadan called?

- (a) Ishraq Salah
- (b) Taraweeh Salah
- (c) Fard Salah
- (d) There are no special Night Prayers

93. Choose the correct phrasal verb to complete the sentence:

The lease of our premises has —— and we have to vacate it.

- (a) run out
- (b) run off
- (c) run over
- (d) run down

94. How important is Zakat in Islam?

- (a) Zakat is so important that it forms the Third Pillar of Islam
- (b) Zakat is not so important in Islam
- (c) Zakat is just a minor responsibility
- (d) None of the above

95. CCI has penalised which sports authority November 2017?

- (a) BAI
- (b) BCCI
- (c) ICCI
- (d) SAI

96. Musa (AS) : ? :: Muhammad (PBUH) : Rasulullah

- (a) Kalimullah
- (b) Khalilullah
- (c) Ruhullah
- (d) Zabiullah

97. In which month was the Qur'an revealed?

- (a) Rabi-ul-Awwal
- (b) Muharram
- (c) Shaaban
- (d) Ramadan

98. What is the currency of Austria?

- (a) Krone
- (b) Franc
- (c) Dollar
- (d) Euro

99. Harun al-Rashid belonged to which dynasty?

- (a) Umayyad
- (b) Abbasid
- (c) Fatimid
- (d) None of the above

100. Which of the following is part of Muslim belief?

- (a) The Day of Judgment
- (b) The Afterlife
- (c) Prophecy
- (d) All of the above

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