

*** COMMON QUARTERLY EXAM- 2024**
Standard - XII

Time : 3.00 hrs

BOTANY

Marks: 70

Part - I

Note: i) Answer all the questions. ii) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer:-

15×1=15

- 1) Ruminant endosperm is found in _____
 a) Cocos b) Areca c) Vallisneria d) Arachis
- 2) The Dominant epistatis ratio is _____
 a) 9:3:3:1 b) 12:3:1 c) 9:3:4 d) 9:6:1
- 3) Which of the following is the start codon _____
 a) AUG b) UGA c) UAA d) UAG
- 4) ECORI cleaves DAN at _____
 a) AGGGTT b) GTATATC c) GAATTC d) TATAGC
- 5) Solidifying agent used in plant tissue culture is _____
 a) Nicotinic acid b) Cobaltous chloride c) EDTA d) Agar
- 6) Match the following and find the correct answer
 i) Pentasomy - A) $2n-2$
 ii) Double monosomy - B) $-2n+1$
 iii) Nullisomy - C) $2n-1-1$
 iv) Trisomy - D) $2n+3$
 a) i-C, ii-D, iii-B, iv-A b) i-B, ii-C, iii-D, iv-A
 c) i-C, ii-B, iii-A, iv-D d) i-D, ii-C, iii-A, iv-B
- 7) How can we reverse the sterility of F1 hybrid _____
 a) Genetic engineering b) protoplasmic fusion
 c) Induced mutation d) Induced chromosomal mutation
- 8) Match the following and find the correct answer
 i) Free floating hydrophyte - A) Utricularia
 ii) Routed floating hydrophyte - B) Pistia
 iii) Submerged floating hydrophyte - C) Hydrilla
 iv) Rooted - submerged hydrophyte - D) Nymphaea
 a) i-B, ii-D, iii-A, iv-C b) i-B, ii-C, iii-D, iv-A
 c) i-C, ii-D, iii-A, iv-B d) i-D, ii-C, iii-B, iv-A
- 9) The genes controlling the seven pea characters studied by mendal are known to be located on how many different chromosomes
 a) seven b) six c) five d) four
- 10) In which techniques Ethidium Bromide is used _____
 a) Southern Blotting techniques b) Western Blotting techniques
 c) Polymerase chain Reaction d) Agroße gel Electroporosis
- 11) Ecology is the study of an individual species is called _____
 i) community Ecology ii) Avtecology iii) species ecology iv) synecolgy
 a) i only b) ii only c) i and iv only d) ii and iii only
- 12) Which one of the following is a correct set?
 a) Vincristinc-Cinechona-Anticarcinogen
 b) Capsacin - cartharanthusroseus - Antimalarial
 c) Digoxin - Digitalis purpuria - Cardial tonic
 d) Codeine - capsicum annum - Analgestic

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- 13) What is the phenotype of wheat kernal colour for the genotype: $R_1R_2r_1r_2$?
 a) Dark red b) medium dark red c) medium red d) Light red
- 14) Which of the given plant produces cardiac glycosides
 a) Calotropis b) Acacia c) Nepenthes d) Utricularia
- 15) Spliceosomes are not found in cells of _____
 a) plants b) fungi c) Animals d) Bacteria

Part - II

Answer any six questions. Question No.24 is compulsory:

6×2=12

- 16) Name the levels of Ecological hierarchy.
 17) Draw this diagram and label the parts.



- 18) Write short notes on "Pollen kitt"
 19) Give the names of the scientists who rediscovered mendelism.
 20) What is TATA box
 21) Name the chemicals used in gene transfer
 22) What do you mean "Embryoids"
 23) Draw the diagram showing altitudinal zonation of veretation.
 24) This is a typé Chromosomal abnormality - find it out and give a note on it



Part - III

Answer any six questions. Question No.33 is compulsory:

6×3=18

- 25) Differentiate grafting and Layering
 26) Draw the flowchart for triticale production.
 27) Distinguish habitat and Niche
 28) What is meant by Southern blotting
 29) Write a short notes on Sharbati Sonora - 64
 30) Draw the structure of mature Embryo sac
 31) What is Atavism.
 32) What is meant by Capping and tailing.
 33) What is meant by Bioremediation.

Part - IV

Note: Answer all the questions:-

5×5=25

- 34) a) Bring out the inheritance of chloroplast gene with an example. [or]
 b) With a suitable diagram explain the structure of on Ovule.
- 35) a) Compare the various types of Blotting techniques. [or]
 b) Write a Advantages of Artificial seeds
- 36) a) What do you know about the word PBR-322? [or]
 b) Write the advantages and disadvantages of Bt-Cotton.
- 37) a) Explain the mechanism of crossing over. Draw the diagrams. [or]
 b) Discuss the steps involved in microsporogenesis.
- 38) a) Enumerate the characteristic features of Anemophilous flowers. [or]
 b) Describe "RNA editing" in plants.
