

Code No.

L – 4028

**Entrance Examination for Admission to the P.G. Courses
in the Teaching Departments, 2021**

CSS

BIODIVERSITY CONSERVATION

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General Instructions

1. The Question Paper is having two Parts — Part 'A' Objective type (60%) & Part 'B' Descriptive type (40%).
2. Objective type questions which carry 1 mark each are to be (✓) 'tick marked' in the response sheets against the appropriate answers provided.
3. 8 questions are to be answered out of 12 questions carrying 5 marks each in Part 'B'.
4. **Negative marking** : 0.25 marks will be deducted for each wrong answer in Part 'A'.

Time : 2 Hours

Max. Marks : 100

To be filled in by the Candidate									
Register Number	in Figures								
	in words								

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PART – A

(Objective Type)

Choose appropriate answer from the options in the questions. **One mark each.**

(60 × 1 = 60)

1. Vitamin P is a
 - a) Carbohydrate
 - b) Flavonoid
 - c) Enzyme
 - d) None of these

DO NOT WRITE HERE

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2. Graphical representation of cumulative frequency distribution is
- a) Frequency curve
 - b) Ogive
 - c) Arithmetic line graph
 - d) None of these
3. Stains excluded by the living cells but taken up by dead cells are called
- a) Vital stains
 - b) Counter stain
 - c) Supravital stain
 - d) None of these
4. A common feature between cockroach and earthworm is
- a) Nephridia
 - b) Ommatidia
 - c) Coccon formation
 - d) Ventral nerve cord

20. Balloon like outgrowths seen inside secondary xylem vessel is
- a) Tyloses
 - b) Tylosoid
 - c) Casparian thickening
 - d) Periderm
21. Carmine is obtained from the dried female bodies of
- a) *Drosophila melanogaster*
 - b) *Dactylopius coccus*
 - c) *Apis mellifera*
 - d) *Dactylopterus volitans*
22. The characteristic spherical bodies found in secretory tapetum of the anther is termed as
- a) Golgi bodies
 - b) Cajal bodies
 - c) Pro-Ubisch bodies
 - d) None of these
23. Which one of the following compounds is used in protoplast fusion?
- a) Sorbitol
 - b) Polyethylene glycol
 - c) Dinitrophenol
 - d) Mannitol
24. Ramsar convention was on the conservation of
- a) Forests
 - b) Deserts
 - c) Grass lands
 - d) Wetlands
25. Elephantiasis caused by
- a) *Wuchereia bancrofti*
 - b) *Ascaris lumbricoides*
 - c) *Enterobius vermicularis*
 - d) *Fasciola hepatica*
26. The function of amphigastria is
- a) Absorption of water
 - b) Storage of water
 - c) Protection from microbes
 - d) Protection from insects

27. Lateral roots are arising from
- a) Endodermis
 - b) Pericycle
 - c) Cortex
 - d) Pith
28. A pteridophyte which is used as biofertilizer is
- a) *Azolla*
 - b) *Salvinia*
 - c) *Marsilea*
 - d) None of these
29. Ribosome biosynthesis takes place in
- a) Cytoplasm
 - b) Nucleolus
 - c) Mitochondria
 - d) None of these
30. Which among the following is the principal pigment in photosynthesis?
- a) Chlorophyll a
 - b) Chlorophyll b
 - c) Carotene
 - d) Xanthophyll
31. Which of the following has very close link between Gymnosperms and Angiosperms?
- a) *Cycas*
 - b) *Cryptomeria*
 - c) *Gnetum*
 - d) *Zamia*
32. *Sepia* is commonly known as
- a) Star fish
 - b) Jelly fish
 - c) Cuttle fish
 - d) Silver fish
33. Fossils in which the external form and internal structure are preserved is
- a) Compressions
 - b) Petrifications
 - c) Incrustations
 - d) Impressions

34. Which algae are almost exclusively marine?
- a) Brown algae
 - b) Blue green algae
 - c) Desmids
 - d) Green algae
35. Nomenclatural synonyms have
- a) Same type
 - b) Same author
 - c) Different types
 - d) Different taxonomic rank
36. The first invertebrates to develop a true nervous system are
- a) Flat worms
 - b) Sponges
 - c) Coelenterates
 - d) Annelid
37. Name the organism that causes quick wilt of black pepper
- a) *Phytophthora*
 - b) *Alternaria*
 - c) *Pyricularia*
 - d) *Plasmopara*
38. The plant used in folk medicine and colloquially named as “Arogyapacha” is
- a) *Withania somnifera*
 - b) *Sarcostemma viminalis*
 - c) *Trichopus zeylanicus*
 - d) None of these
39. A neurotoxin produced from fungus is
- a) Amylopectin
 - b) Amaritin
 - c) Ergotamine
 - d) Chitin
40. Biodiversity hotspots are designated primarily based on
- a) Endemism
 - b) Species diversity
 - c) Geographic location
 - d) None of these

41. The locomotory organs of Echinoderms are called
- a) Parapodia
 - b) Pseudopodia
 - c) Tube feet
 - d) Setae
42. Which of the following is pleiomorphic?
- a) Mycoplasma
 - b) Streptococcus
 - c) Lactobacillus
 - d) Pseudomonas
43. According to the National Forest Policy, the percentage of forests for ecological balance is
- a) 13.3%
 - b) 23.3%
 - c) 33.3%
 - d) 43.3%
44. Asexual reproductive structure in Lichen is
- a) Apothecium
 - b) Soridia
 - c) Gonidia
 - d) Conidia
45. Process by which new species is formed is called
- a) Natural selection
 - b) Speciation
 - c) Orthogenesis
 - d) None of these
46. Free living platyhelminthes forms belong to the class
- a) Cestoda
 - b) Trematoda
 - c) Turbellaria
 - d) Nematoda
47. Coralloid roots are present in
- a) *Gnetum*
 - b) *Pinus*
 - c) *Cycas*
 - d) *Taxus*

48. What is the expansion of WiFi?
- a) Wireless Fixture
 - b) Wireless Film
 - c) Wireless Fidelity
 - d) Wireless Fidgety
49. Which one of the following is the first known fossil vascular plant?
- a) *Cooksonia*
 - b) *Zosterophyllum*
 - c) *Rhynia*
 - d) *Williamsonia*
50. Tough resistant outer cuticularized exine of pollen is composed largely of
- a) Cellulose
 - b) Chitin
 - c) Sporopollenin
 - d) None of these
51. Meristematic zone is characteristic of the sporophyte of
- a) *Anthoceros*
 - b) *Riccia*
 - c) *Marchantia*
 - d) *Funaria*
52. The protective covering of brain is
- a) Pericardium
 - b) Pleura
 - c) Peritoneum
 - d) Meninges
53. Name the plant commonly called as whisk fern
- a) *Equisetum*
 - b) *Psilotum*
 - c) *Selaginella*
 - d) *Pteris*
54. Inheritance of ABO blood group illustrates
- a) Polyploidy
 - b) Multiple allelism
 - c) Euploidy
 - d) Incomplete dominance

55. Fungal cell wall specifically contains
- a) Xylan
 - b) Chitosan
 - c) Glycogen
 - d) Chitin
56. Triticale has been developed by crossing wheat with
- a) Rye
 - b) Barley
 - c) Rice
 - d) Pearl millet
57. Common bath sponge is
- a) Euplectella
 - b) Spongilla
 - c) Syon
 - d) Euspongia
58. Polygonum type megasporogenesis is termed as
- a) Monosporic
 - b) Bisporic
 - c) Tetrasporic
 - d) None of these
59. The property of *Taq polymerase* that makes it suitable for PCR is
- a) Low molecular weight
 - b) Solubility in water
 - c) Heat stability
 - d) Easy availability
60. Measure of the frequency with which the average article in a journal has been cited in a particular year is
- a) Citation Factor
 - b) Citation Index
 - c) Impact Factor
 - d) Impact Index

ANSWER SHEET — PART — A

1	A	B	C	D	E
2	A	B	C	D	E
3	A	B	C	D	E
4	A	B	C	D	E
5	A	B	C	D	E
6	A	B	C	D	E
7	A	B	C	D	E
8	A	B	C	D	E
9	A	B	C	D	E
10	A	B	C	D	E
11	A	B	C	D	E
12	A	B	C	D	E
13	A	B	C	D	E
14	A	B	C	D	E
15	A	B	C	D	E
16	A	B	C	D	E
17	A	B	C	D	E
18	A	B	C	D	E
19	A	B	C	D	E
20	A	B	C	D	E

21	A	B	C	D	E
22	A	B	C	D	E
23	A	B	C	D	E
24	A	B	C	D	E
25	A	B	C	D	E
26	A	B	C	D	E
27	A	B	C	D	E
28	A	B	C	D	E
29	A	B	C	D	E
30	A	B	C	D	E
31	A	B	C	D	E
32	A	B	C	D	E
33	A	B	C	D	E
34	A	B	C	D	E
35	A	B	C	D	E
36	A	B	C	D	E
37	A	B	C	D	E
38	A	B	C	D	E
39	A	B	C	D	E
40	A	B	C	D	E

41	A	B	C	D	E
42	A	B	C	D	E
43	A	B	C	D	E
44	A	B	C	D	E
45	A	B	C	D	E
46	A	B	C	D	E
47	A	B	C	D	E
48	A	B	C	D	E
49	A	B	C	D	E
50	A	B	C	D	E
51	A	B	C	D	E
52	A	B	C	D	E
53	A	B	C	D	E
54	A	B	C	D	E
55	A	B	C	D	E
56	A	B	C	D	E
57	A	B	C	D	E
58	A	B	C	D	E
59	A	B	C	D	E
60	A	B	C	D	E

BIODIVERSITY CONSERVATION

PART – B

(Descriptive Type)

Answer **any eight** questions.

(8 × 5 = 40 Marks)

1. Compare the secondary growth in stems and roots of dicotyledons.
2. Give an account of soil microbes and explain their significance.
3. Describe the affinities of bryophyte with algae and Pteridophytes.
4. Give an account of parasitic protozoans, their pathogenicity and significance.
5. Discuss the different flight adaptations found in birds. Add notes on flightless birds.
6. Explain concepts of Biological classification with examples for artificial, natural and phylogenetic system.
7. Write a detailed account of various numerical genetic syndromes and discuss their causes.
8. Describe the different types of animal physiological processes and mention their significance.
9. Explain the molecular mechanism of DNA replication in prokaryotes and eukaryotes.
10. Discuss the recent trends in plant breeding. Add notes on new breeding techniques
11. Describe the various Biodiversity hotspots in India.
12. Distinguish between fossils and living fossils.

