2024 - Basic Course in Ornithology
Week 8 Assignment

1) You are out birdwatching in different contexts, which of the following qualify as mixed-species flocks in the context of what we spoke about in class?

a. A flock of shore-birds along the banks of a stagnant water body
b. A group of frugivores feeding on fruits at a Singapore cherry tree
c. A flock of birds feeding on grains in someone's backyard
d. A flock of insectivorous birds feeding in the understory of a wooded area that are also moving together

2) Which of the following statements apply to the mixed-species flocks in the Western Ghats? (use the principles that you have learnt in class today)

a. Mostly insectivorous forest birds participate in these flocks
b. Most species that participate in flocks have a common predator
c. Most flock participants are small-bodied passerine birds
d. All of the above

3) According to the research so far, what kind of benefits do birds get from participating in mixed-species flocks? (select two)

a. Efficient foraging
b. Protection from predators
c. Ease of movement
d. Mate finding

4) Which of the following statements about benefits that participants get from flock participation are true?

a. Not all species are equally important in terms of providing benefits to other species in the flock
b. Some species are known to lead flocks ie. they are almost always found in the front of the flock
c. Intraspecifically gregarious species in flocks tend to be flock leaders thereby making them important in flocks
d. All of the above

5) Which of the following are the main predators of the birds in mixed-species flocks?

a. Small hawks
b. Eagles
c. Snakes
d. Rodents

6) Predators of birds in mixed-species flocks use a/an _____ behaviour while hunting

a. Ambush
b. Scavenging
c. Searching
d. Pursuit

7) Sallying species in flocks (eg. flycatchers and drongos), gain feeding benefits through a certain mechanism, which is -

a. Following other birds that disturb insects in the understorey
b. Picking insects on leaf surfaces
c. Searching in leaf litter
d. None of the above

8) Birds that use _____ foraging behaviours are likely to detect predators sooner as a by-product of their feeding behaviour.

a. Gleaning
b. Searching
c. Sallying
d. None of the above

9) You follow mixed-species flocks that have only two species and you find that most such flocks that had at least one intra-specifically gregarious species or social species, are joined by a third species. What can you conclude based on your observations?

a. Intraspecifically gregarious species always participate in flocks
b. Intraspecifically gregarious species are important / key in mixed - species flocks
c. Intraspecifically gregarious species are not important in mixed species flocks
d. All of the above

10) Mixed-species flocks of insectivorous forest birds have been documented from all continents across the world except -

a. Africa
b. Antarctica
c. Europe
d. South America

11) A direct count of the number of birds detected at a particular place and at a particular time is called:

(A) census
(B) spot-mapping
(C) call count
(D) distance sampling

12) The proportion of birds in the total population of a particular species that are actually observed while sampling is a measure of:

(A) Recapture probability
(B) Capture probability
(C) Detection probability
(D) Sample

13) Which of the following techniques is distance sampling NOT an option?

(A) Line transect

(B) Point count

(C) Mist netting

(D) None of the above

14) Two bird communities have the same species as each other, but in different abundances, as shown below:

Species	Population in Community A	Population in Community B
Yellow-throated Fulvetta	35	40
Rufous-winged Fulvetta	22	26
Golden-breasted Fulvetta	21	54
Black-throated Parrotbill	45	112
Yellow-cheeked Tit	16	11
Grey-sided Laughingthrush	12	3
Red-faced Liocichla	11	2
Grey-cheeked Warbler	34	4
Green-tailed Sunbird	16	2
Snowy-browed Flycatcher	8	1

Which of the two communities will need greater sampling effort such that all species in the community are found?

(A) Community A
(B) Community B
(C) Both will require equal sampling effort
(D) Cannot say with the information provided

15) In line transect sampling, distance (x) from the line at which the number of birds missed within x is equal to the number of birds detected beyond x is called:

(A) Optimum detection belt

(B) Detection probability rectangle
(C) Effective strip width
(D) Rangefinder distance

16) For mark-recapture techniques with birds, most bird species need to be caught and tagged (usually with metal and/or plastic rings) because:
(A) Most species are small and cannot be observed
(B) Most species fly very fast and cannot be observed
(C) Most species are silent and therefore difficult to detect
(D) In most species, the human eye cannot distinguish between different individuals

17) A compass and a rangefinder would typically be used in:
(A) Line transect sampling
(B) Point count sampling
(C) Call count censuses
(D) Capture-mark-recapture

18) Rank-abundance curves describe:
(A) Survivorship
(B) Change in population over time
(C) Change in population across space (e.g., in different habitats)
(D) Community structure

19) Sampling birds from a road transect can lead to biased estimates of population density because one of the assumptions of line transect sampling is likely to be violated. Which one?
a. **Line placement is random with respect to distribution of birds in the habitat**
b. All birds on the line are always detected
c. All birds are detected at their initial location
d. Bird movement speed is low relative to observer speed

20) Open mark-recapture models are used to estimate:
(A) Abundance
(B) Density
(C) Reproductive output
(D) Survival