



Final Examination in Botany

First Term: Jan. 2013

Educational Year: 3rd Level

Program: Environmental Sciences

Subject : (ع.ب. 322)

Course: Flora and Phytogeography

Time: 2hr.

Date: 21/1/2013

Full mark: 60

Question mark: 20

1 – Answer the following:

- A) Explain the climatic classification of vegetational zones on basis of temperature and rainfall together. (10 marks)
- B) Write an essay on either (i) or (ii) : (10 marks)
- (i) The habitat types and flora of the Western Mediterranean Coastal Land.
- (ii) " Egyptian Deserts include a variety of landforms"- Discuss its habitats and characteristic flora.

2 - Give a brief account on:

- a) Characters of wind dispersed disseminules (5 marks)
- b) Types of terrestrial habitats according to the relative availability of water. (5 marks)
- c) The latitudinal zones of vegetation. (5 marks)
- d) Theory of tolerance of species. (5 marks)

3-Discuss in detail each of the following:

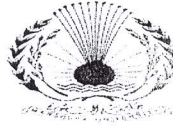
- a) Characteristics of the Egyptian flora. (6 marks)
- b) Habitat types and weed flora of the Nile Delta. (7 marks)
- c) Xerophytic vegetation of Oases and Depressions of Western Desert. (7marks)

Examiners:

Prof. Mohamed Abu Ziada

Prof. Ibrahem Mashly

Mansoura University
Faculty of Science
Botany Department
El-Mansoura, Egypt



جامعة المنصورة
كلية العلوم
قسم النبات
المنصورة - مصر

Final Examination in Botany
First Term: Jan. 2013

Educational Year: Third Level Program (Branch): Biology
Subject: ES(321) Course(s): Molecular biology & biotechnology
Time: 2 hrs Date: 14 / 01 / 2013 Full mark: 60 Question mark: 20
Answer the following questions:

Q1 (20 mark, 10 mark each)

A: In eukaryotes, gene cloning can be initiated from either genomic DNA or mRNA. Mention the advantages of each cloning strategy, what are the factors determining your approach of choice? describe, in details, strategy of gene cloning using RNA.

B: Restriction enzymes represent one of the basic tools for molecular biologists. Describe these enzymes indicating their definition, types, naming, features (specificity, activity, types of formed DNA ends) and importance.

Q2 (20 mark)

A: Define the following terms: (7 mark)

Genome, locus, plasmid, gene, null allele, histone, and DNA ligase.

B: Describe, briefly, each of the following: (13 mark)

- i- Essential feature of gene cloning plasmids. (1.5 mark)
- ii- General steps of gene cloning. (1.5 mark)
- iii- General gene structure in prokaryotes and eukaryotes. (3 mark)
- iv- λ based insertion and replacement vectors. (2 mark)
- v- Main differences in transcription between prokaryotes and eukaryotes. (2 mark).
- vi- Only one method of getting recombinant DNA into host cells. (1.5 mark)
- vii- The use of X-gal for selection of recombinant DNA of interest. (1.5 mark)

Q3 Discuss: (20 mark)

- a- Chemical forces important to Biomolecules.
- b- Medicinal Biotechnology.

Best wishes

امتحان دور يناير ٢٠١٣ م
برنامج : *
المستوى: الثالث
اسم المقرر : احصاء حيوى
كود المادة : ر ٣٠١



جامعة المنصورة – كلية العلوم
قسم الرياضيات
التاريخ : ٢٥ / ١٢ / ٢٠١٢ م
الدرجة الكلية : ٨٠
الزمن : ساعتان

Answer the following questions:

[1] a- A random sample of 100 patients is selected and treated by a new drug for AIDS. After 8 weeks, 20 of them show signs of improvement. Find a 99 % confidence interval for the true proportion of all patients treated by this new drug and show improvement after 8 weeks. (10 Marks)

b- Suppose that in a certain city , the probability that a man has high blood pressure is 0.18 If we randomly select 10 men from this city .

i) Find the probability that exactly 3 men have high blood pressure

ii) Find the expected number of men with high pressure (10 Marks)

[2] a- A Coin is tossed 4 times , let X denotes the number of heads occurs . Find

i) $P(X = 3)$ ii) $E(X)$ iii) $Var(X)$ (10 Marks)

b- A sample of size 64 is drawn from a population with $\mu = 3.2$ and a standard deviation $\sigma = 1.6$. Find the Probability that the sample mean will be

i) more than 3.5 ii) less than 2.7 (10 Marks)

c- In a certain population, suppose that the number of deaths per year from cancer has a Poisson distribution with average 6 Find the probability that in a year there are

i) Exactly 4 deaths ii) Less than or equal two deaths (10 Marks)

[3] The following table shows the age distribution (in years) of 76 patients who complained of flu. (30 Marks)

Age	5.5 – 10.5	10.5 – 15.5	15.5 – 20.5	20.5 – 25.5	25.5 – 30.5	30.5 – 35.5
frequency	6	10	20	22	13	5

Find i) The sample Mode ii) The sample median iii) The sample variance

$$\varphi(1.5) = 0.933 , \varphi(-2.5) = 0.0062 , t_{(0.025, 8)} = 2.306 , t_{(0.025, 9)} = 2.262$$

$$Z_{0.005} = 2.58 , Z_{0.025} = 1.96$$

* برامج : كيمياء و حيوان - فيزياء حيوى - ميكروبيولوجى - كيمياء ونبات - علوم البيئة

مع أطيب التمنيات بالنجاح د. فاتن شبحه - د. نورا فخرى