University of Baghdad College of science Department of Biology



Competitive exam of postgraduate studies / 2016-2017
PhD. degree / Botany (1)

Choose the correct answer (MCQ)

Q1/ Plants tolerate to salinity called a- glycophytes b- halophytes c- Obligate halophytes Q2/ Amino acids concern with drought tolerance is a- proline b- glycine c- arginine O3/Build enzyme for nitrate reductase a- increase with increase salinity b- Decrease with increase salinity c- Not change Q4/ Plants can avoide freezing by a-Build high osmosis potential b- Utilize separate freezing to maintain its temperature c- Increase unsaturated lipid acids Q5/ The major changes in solutes conc. due to hardening to freezing is a- Amino acids b- sugar c- glycocel O6/ Hormone responsible for senescence is b- Cytokinins c- Ethylene O7/ Membrane integrity is greatly affected by stresses a- Drought and heat b- Chilling and salinity c- Flooding and freezing O8/ Hormone is synthesized from Acetyl CoA via mevalonate pathway a- Ethylene b- Cytokinins c- ABA Q9/Scientist discover O2 is from water through photosynthesis a- Ruben b- Calvin c- Blackman Q10/ Chlorophyll C present in a- Red algae b- Brown algae c- Brown and red algae Q11/ Number of molecular formed from fermentation of glucose is a- 2ATP b-4 ATP c-8ATP Q12/ First structure formed from Krebs cycle is c- isocitrate a- oxaloacetate b - citrate Q13/C4 plants can fix CO2 by enzyme a- RUBP caboxylase b- PEP caboxylase c- Both of them Q14/ Plants flower in day length more than 13 hours a- Long day plant b- Short day plant c- Neutral day plant Q15/ Phytochrome absorb light Pr Shape of c- No shape effect a- Active shape b- Unactive shape Q16/ The water molecules are polar in nature and are a- Positively charged b- Negatively charged c- Neutral charged Q17/ Hormone plays role for open stomata is c- Gibberellins a \uxin b- ABA Q18/ Hormone plays role for bud dormancy is a- Auxin b- cytokinin c- Gibberellins O19/ One theory for ion active absorption is a- Salinity respiration b- Mass flow c- Ion exchange O20/ Krebs cycle yield a- 12 ATP b-36 ATP c-6 ATP Q21/ Hormone can delay leaf senescence is a- ethylene b- cytokinins c- auxin Q22/Reductase nitrate enzyme is a- Not active in light and promote by main principle b- active in light and promote by main principle

c- active in light and do not promote by main principle

Q23/ The less dangerous toxin is	
a- Neurotoxin b- dermatotoxin	c- hepatotoxin
Q24/ Electrons needed for N2-fixation in blue-gree	en algae are
a- Two pairs b- one pair	c- three pairs
Q25/ The most important in N2-fixation is	100 (500 CCC) (5
a- Heterocytes b- N2-ase enzyme	c- Nitrogen
Q26/ Algae which live on the plant bodies called	
a- Epiphytic b- Epizoic	c- Epillithic
Q27/The algae which lysed completely during Auto	omn called seasonal life
a- Perrenial b- pseudoperrenial	c- annual
Q28/ Falgellae are not present in	group of algae
a- Phaeophyta b- Rhodophyta	c- Chlorophyta
Q29/ A taxa whose geographical ranges overlap ca	
a- Apomixis b- allopatric c- sympatric	d- self-incompatibility
Q30/ A flower which never open and self-pollination	n is
a- Polygamy b- perfect flower c- cleistogam	y d- heterophylly
Q31/ Which plant bear monodelphous stamens	
a- Pea b- Datura c- Tobacco	d- Malva
Q32/The plants live in the same region but flower a	
a- Geographical isolation b- ecological-isolation	c- mechanical-isolation d- seasonal-isolation
Q33/Which term use if the stamens are more in len	gth than the petals?
a- Exserted b- inserted c-	
Q34/Dichogamy is facilitates:	
Cross – pollination b- self – pollination	c- crossing – over d- as in both a & b
Q35/Cleistogamous flower are:-	
a- Flower are unisexual b- flower are never open	c- flower are bisexual d- as two types b&c
Q36/Hydrophilous plant such ad:-	
a- Eloda b- Hydrilla c- Va	alliseneria d- as in three types a,b,&c
Q37/The famous Linnaeus books	
a- General – plantarum b- species plantarum c-	as two types a&b d- non any one above
Q38/The plant with staminate and pistillate flower of	
	nonoecious d- gynodioecious
Q39/Ginkgo belong to the taxon:	
a-Ginkgoales b-Ging family c-Ginger family	y
Q40/ The biggest family of Angiospermae is:	
a-Gramineae b-Cruciferae c-Orchidaceae	
Q41/ Tristyly phenomenon means:	
a- Flower shows 3-styles b- 3-short styles,3- mostyles	edium styles c-Species flower show 3kindes of
Q42 Disruptive N.S. includes or means:	
	Imagazlar N. C
	Irregular N.S.
Q43/ Heteromorphic distyly incompatibility called: a- Diallelic system b-Dishaped incompatibility	a Hataramarrhia family
Q44/ Local breeding population means:	c-Heteromorphic family
a- Gamodema b-Gamospory c- Gametospory	
a Gamodema o-Gamospory e-Gametospory	

Q45/ A membrane around the vacuole it is known as ----a- Vacuole membrane b- plasma membrane c- pit- membrane d-tonoplast Q46/ Who was father of Botany ----a- Aristotle b- Leeuwenhoek c- Brown d-Theophrastus O47/ The root hairs are usually ----a- Multicellular b- unicellular c- uni and multicellular Q48/In root the region after meristematic region (or apical region) is called as ----a- Differentiation region b- absorption region c- elongation region Q49/type of the vascular bundle in stem of monocote plant called as b- Conjoint collateral closed c- radial vascular bundle d- concentric a- Conjoint collateral vascular bundle Q50/the epidermis becomes multilayered in some plants like a- Potamogeton b- Nerium c- Ficus d- as two types b&c O51/the inner most layer of cortex in stem it is called as a- Peridermis b- exodermis c-hypodermis d-endodermis Q52/ the epidermis layer has thin or absent cuticle as in plant of a- Hydrpphytes b- xerpphytes c- mesophytes d- Bryophytes Q53/ plant belong to gymnosperms because a- Endospermis haploid b- seeds are formed c- ovules are naked d- none of above Q54/ the science study pleen-grain is known a- Pollinium b- pleobotany c- palynology Q55/ Helicase enzyme found in E coli A. gyrase B.Topo isomerace ii C.Dna B Q5 ermination coden of Protien synthesis: A.AuG B.AAG C.ATc Q57/ RNA in Eukaryotic cell have: A. Palindromes B.Poly-A-tail C.Poly-T-tail Q58/ non functional gene like: A.Histones B.Alu-gene C.Pseudogenes Q59/The partial hydrolysis of DNA give: A. deoxy ribose B. Purines & Pyrimidines C. Nucleotides Q60/The U.v light effect DNA: A. denaturation B. depurination C.Purine dimer

Answer the following questions briefly(Short answers)

Q2/ The ratio between hormones; play important role in break bud dormancy. Q3/Free absorption defines as Q4/The name of scientist who is the first put the general equation for photosynthesis. Q5/Emerson effect is;	
Q9/ Types of algal toxins and their chemical structures? Q10/ Enumerate the characters supposed to be present in any organism could fix-N2? Q11/ what is the N2 fixation? Q12/ what is the eryophillic alga? Q13/ What are the important characters for any algal to produce toxins? Q14/Give names of three types of algal culture?	
Q15/ What is the ethological - isolation? Q16/ What is the Pollinia? Q17/ Give two factors cause the change and evolution at the population level? Q18/ What is the speciation? Q19 efine Taxon? Q20/ Giveonly two characters of the anemophilous flowers? Q21/ What is the protogynous? Q22/ What is the reproduction – isolation? Q23/ Define Tribe? Q24/ What is the natural – selection?	
Q25/ Give only the structure of the cystolith – crystal? Q26/What are the differences between xylem arrangement in Dicot stem and Dicot root? Q27/ Give only names of the three types of collenchyma tissue? Q28/ Give only the structure of the aleuron – grain? Q29/In which plant finds the motor-cells? Q30/Explain by labeled drawing three types of starch grains? Q31/Explain the differences between hypodermis in dicot and monocot stem? Q32/ Write short note of the characters of sapwood? Q33/ Write short note of the arenchyma tissue? Q34/ Yrite short note of the characters of heart wood? Q35/ why are Proteins not directly translated from DNA? Q36/ What are the roles of histones in the assembly of chromosomes? Q37/ Which RNA is referred to by the term noncoding RNA? Q38/ What 's the control dogma?. Q39/What properties must a polymer Possess for it to be capable of carrying genetic information? Q40/What are the important of exonuclease activity in DNA Replication?	