Shivaji University, Kolhapur

Question Bank for Mar 2022 (Summer Examination)

Subject Code: 78910 Subject Name: Botany Paper VIII

l.		in part of an enzyme.		
	A. Co-factor	C. Isozyme		
	B. Co-enzyme	D. Co-enzyme-A		
,	Enzymes arein nature.			
	A. Lipid	C. Protein		
	B. Carbohydrates	D. Sugar		
3.	Enzymes are sensitive to heat a	nd		
	A. pH	C. Alkali		
	B. Acid	D. Cold		
	enzyme catalyse the oxidation-reduction reaction.			
	A. Transaminase	C. Phosphofructokinase		
	B. Glutamine synthatase	D. Oxido-reductase		
	Induced Fit hypothesis for mechanism of enzyme action was proposed by			
	A. Kuhne	C. Kocher		
	B. Koshland	D. Emil Fischer		
	Enzymes acts on specific			
	A. Substrate	C. Ions		
	B. Molecule	D. Photons		
	types of enzymes have been recognized by IUB.			
	A. 4	C. 6		
	B. 5	D. 8		
	element is involved in nitrate reduction in plants.			
	A. calcium	C. molybdenum		
	B. phosphorous	D. zinc		
	Azolla shows association withalgae.			
	A. Nostoc	C. Oscillatoria		

	B. Anabaena	D. Calothrix
10.	irected bygenes.	
	A. nif genes	C. Ti genes
	B. β genes	D. α genes
11.	Conversion of nitrates to nitrogen is calle	d
	A. Ammonification	C. Nitrogen fixation
	B. Nitrification	D. Denitrification
12ATP molecules are required to fix one molecule of nitrogen.		
	A. 20	C. 16
	B. 6	D. 12
13pigments are present in root nodules of leguminous plant		
	A. Phytochrome	C. Haemoglobin
	B. Leghaemoglobin	D. Nod-haemoglobin
14.	nard seed coat.	
	A. Annonaceae	C. Leguminoceae
	B. Orchidacae	D. Poaceae
15.	and inplants.	
	A. Mangrove	C. Parasitic
	B. Saprophytic	D. Epiphytic
16.	the cotyledons are brought above the soil.	
	A. Epigeal	C. Vivipary
	B. Hypogeal	D. Ovipary
17.	is the uptake of water	by seed coat.
	A. Absorption	C. Transpiration
	B. Imbibition	D. Diffusion
18. The proteins are hydrolysed into amino acids byenzymes of		cids byenzymes during seed
	germination.	
	A. Lipase	C. Peptidases
	B. Amylase	D. Invertase
19.	is the end product of gl	ycolysis.
	A. Citric acid	C. Pyruvic acid
	B. A.COA	D. Butyric acid
20.	is the power house of the co	ell.

	A. Chloroplast	C. Cytosol				
	B. Nucleus	D. Mitochondria				
21.	The electron transport system consist of	multimolecular complexes.				
	A. 4	C. 5				
	B. 3	D. 2				
22.	Krebs cycle takes place in					
	A. Cytosol	C. Chloroplast				
	B. Mitochondria	D. Peroxisome				
23.	During aerobic respiration one molecule of	During aerobic respiration one molecule of glucose generatesATP				
	molecules.					
	A. 34	C. 38				
	B. 36	D. 32				
24.	Anaerobic respiration occurs in absence of molecular					
	A. Nitrogen	C. Hydrogen				
	B. Oxygen	D. Carbon dioxide				
25.	TCA cycle is also known as					
	A. Glyoxylate cycle	C. Glycolate cycle				
	B. Citric acid cycle	D. EMP pathway				
26.	Enzyme acts on specific					
	A. Molecules	C. Ions				
	B. Substrates	D. Photons				
27.	Chemically enzymes are					
	A. Proteins	C. Lipids				
	B. Carbohydrates	D. Polyphenol				
28.	proposed the Lock and Key	hypothesis of enzyme action.				
	A. Emil Fischer	C. Kuhne				
	B. Koshland	D. Kocher				
29.	An enzyme that joins the ends of two stra	nds of nucleic acid is				
	A. Polymerase	C. Synthatase				
	B. Ligase	D. Hydrolase				
30	The function of enzyme phosphorylase is					
	A. Transfer of carboxylase group	C. Transfer of inorganic phosphate				
	B. Transfer of amino group	D. addition of water molecule				

31is produced with the combination of apoenzyme and prosthetic				
	A. Enzyme-substrate complex	C. Holoenzyme		
	B. Enzyme-product complex	D. Co-enzyme		
32 Apoenzyme isof holoenzym		loenzyme.		
	A. protein part	C. co-factor		
	B. prosthetic group	D. non-protein part		
33.	is a symbiotic nitrogen fix	ing bacteria.		
	A. Pseudomonas	C. Clostridium		
	B. Rhizobium	D. Azotobacter		
34.	bacteria converts ammonia	um compounds into nitrates.		
	A. Denitrifying bacteria	C. Nitrifying bacteria		
	B. Ammonifying bacteria	D. Sulphur bacteria		
35.	is a major plant macronutr	ient found in nucleic acid and proteins.		
	A. Nitrogen	C. Sulphur		
	B. Calcium	D. Iron		
36.	The conversion of atmospheric free nitr	ogen into organic forms is termed as		
	A. Nitrogen fixation	C. Denitrification		
	B. Nitrification	D. Nitrogen assimilation		
37.	The viviparous condition is related to high concentration ofin the leaves			
	of mother plant.			
	A. Ammonium	C. Chlorides		
	B. Phosphates	D. Nitrates		
38pigments are present in root nodules of l		ot nodules of leguminous plants.		
	A. Phytochrome	C. Nod-haemoglobin		
	B. Leghaemoglobin	D. Haemoglobin		
39. The red and far-red sensitivity of seeds is due to		is due topigment.		
	A. Chlorophyll a	C. Phytochrome		
	B. Carotenoid	D. Xanthophyll		
40. Intype of seed germination cotyledons do no		a cotyledons do not come out of the soil		
	surface.			
	A. Epigeal	C. Hypogeal		
	B. Vivipary	D. none of these		
41.	The method of softening and weakening	g of seed coat is known as		

	A. Scari	fication	C. Harde	ening	
	B. Impac	etion	D. Loose	ening	
42. Anaerobic respiration is always completed in					
	A. cell n	ucleus	C. cell w	all	
	B. cell c	ytoplasm	D. cell m	nembrane	
43.	Glycolys	sis occurs in			
	A. Cytos	sol	C. Chlor	oplast	
	B. Mitoc	chondria	D. Perox	isome	
44.		is an important cause of seed dormancy.			
	A. Hard	seed coat	C. Reser	ve food	
	B. Matu	re embryo	D. None	of these	
45.		is dormancy induced hormone			
A. Indole Acetic acid		C. Gibbe	C. Gibberelic acid		
	B. Absci	sic Acid	D. Cytok	xinin	
46. During anaerobic respirationis		is conv	is converted into alcohol and CO ₂		
	A. Malic acid		C. Pyruvic acid		
	B. Citric	acid	D. Oxalo	pacetic acid	
47.		is a process responsible fo	or oxidation o	of organic substances with release	
	of energ	y and CO ₂ .			
	A. Photo	osynthesis	C. Respi	ration	
	B. Protei	in synthesis	D. Transpiration		
48.	Isoenzyr	Isoenzymes are			
	A. multiple forms of enzymes		C. multij	C. multiple forms of lipids	
	B. multiple forms of fats		D. multiple forms of polyphenols		
49.	Non-protein part of enzyme is called as				
	A.	cis	B.	trans	
	C.	aldo	D.	prosthetic group	
50.	IUB means				
	A.	International Union of	B.	International Union of	
		Business		Broadcasting	
	C.	International Union of	D.	International Union of Botany	
		Biochemistry			
51.	The atm	ospheric Nitrogen is present in	ıf	orm.	

	A. N	. 2	В. 1	NO_3	
	C. N	H_4	D. 1	NH_3	
52.	Nitrogen comprisesof the earth's atmosphere.				
	A.	10%	B.	20%	
	C.	60%	D.	78%	
53.	The transfer of amino group from one amino acid to a keto acid is called				
	A.	ammonification	В.	N ₂ reduction	
	C.	transamination	D.	assimilation	
54.	protein is secreted in roots to attract N ₂ fixing bacteria from soil.				
	A.	Arginine	B.	Lecithin	
	C.	Cysteine	D.	Polymorphin	
55.	Conversion of glucose to glucose -6-phosphate is catalyzed by				
	A.	hydrolase	В.	phosphofructokinase	
	C.	hexokinase	D.	aldolase	
56.	The net gain of energy from one molecule of glucose during aerobic respiration				
	is				
	A.	34 ATP	В.	38 ATP	
	C.	24 ATP	D.	28 ATP	
57.	End products of respiration in plants are				
	A.	CO ₂ , H ₂ O and Energy	B.	Sugars and H ₂ O	
	C.	Starch and O ₂	D.	H ₂ O and Energy	
58.	Respiratory enzymes are located in				
	A.	Matrix of Mitochondria	B.	Perimitochondrial space	
	C.	Outer membrane	D.	Cristae	
59.	Electron transport system is located in mitochondrial				
	A.	Outer membrane	B.	Inner membrane	
	C.	Inner membrane space	D.	matrix	
60.	The ultimate electron acceptor of respiration in aerobic organism is				
	A.	cytochrome	B.	hydrogen	
	C.	oxygen	D.	glucose	
61.	The failure of seeds to germinate in favorable conditions is				
	A.	Dormancy	B.	Viability	
	C.	Non viability	D.	Longevity	

62.	Seeds in which germination is stimulated by light are called				
	A.	Positive photoblastic	B.	Negative photoblastic	
	C.	photoperiodic	D.	vernalized	
63.	growth hormone break the seed dormancy.				
	A.	Auxins	B.	Gibberellins	
	C.	Abscisic acid	D.	Ascorbic acid	
64.	The method of softening and weakening of seed coat is known as				
	A.	Scarification	B.	Impaction	
	C.	Hardening	D.	Loosening	
65.	The reserve food in seeds during germination is finally converted into soluble				
	A.	Starch	B.	Sucrose	
	C.	Oligosaccharides	D.	Amino acids	
66.	The non-catalytic site of enzyme where end product is bound is called				
		A. Allosteric site		B. Allosteric bond	
		C. Allosteric product		D. Allosteric enzyme	
67.	Multimo	lecular forms of the same enzyn	ne that differ	in their electrophoretic mobility	
	are known as				
	A. Is	soenzyme	B. A _l	poenzyme	
	C. H	loloenzyme	D. Co	o-enzyme	
68.	The enzyme phosphorylase converts starch into soluble sugars at pH				
	A. 5		B. 8		
	C. 7		D. 6		
69.	Lactic acid fermentation is associated withbacteria.				
	A. L	actobacillus	B. Ri	nizobium	
	C. N	Titrosomonas	D. Ps	eudomonas	
70.	enzyme is involved in the production of alcoholic beverages.				
	A. F	umarase	B. Zy	ymase	
	C. D	ehydrogenase	D. Fu	ımarase	

Que 2 Long Answer type questions.

- 1. What are the enzymes? Explain in brief classification of enzymes with suitable example.
- 2. Define Enzyme. Describe the mechanism of enzyme action.

- 3. What are the enzymes? Explain 'Enzyme as a Biocatalyst'.
- 4. What is Respiration? Give an account of Glycolysis.
- 5. Describe Krebs cycle and give its significance.
- 6. Explain the electron transport system in mitochondria.
- 7. What is respiration? Explain mechanism of anaerobic respiration.
- 8. Give an account of fermentation process.
- 9. What is seed dormancy? Give different methods to break seed dormancy.
- 10. Give an account of biochemical changes during seed germination.
- 11. Describe mechanism of nitrogen fixation in root nodules.
- 12. Explain in brief biological nitrogen fixation.

Que. 3 Short Notes

- 1. Anaerobic respiration
- 2. Importance of Fermentation
- 3. Oxidative decarboxylation of pyruvic acid or synthesis of A. COA from pyruvic acid
- 4. Krebs cycle
- 5. Types of Respiration
- 6. Lock and Key hypothesis
- 7. Induced fit hypothesis
- 8. Properties of enzymes
- 9. Co-enzyme
- 10. Co-factor
- 11. Effect of pH and temperature on enzyme activity
- 12. Nif genes
- 13. Assimilation of ammonia
- 14. Nitrogen fixation in root nodules
- 15. Nitrate reduction
- 16. Causes of seed dormancy
- 17. Factors affecting seed germination
- 18. Viviparous mode of seed germination
- 19. Hypogeal type of seed germination
- 20. Epigeal type of seed germination