

Ph.D - Enter. test.

Science
Life science

Con. 3245-12.

(3 Hours)

KK-2591
[Total Marks : 100
28/4/12

Full Name of Candidate:	
Signature of Candidate:	

Instruction to Candidates:

- Total Marks: 100
- Time duration: 03 hours
- Section I consists of 40 multiple choice objective types of questions (all are compulsory) for which there is no negative marking
- Please mark "✓" clearly on one of the four options (a, b, c, or d) of the Answers provided below each Question in Section I with Ink Pen only (not with Pencil)
- Section II consists of questions for which short answers are desired
- Section III consists of questions for which essay type long answers are desired
- Candidates are expected to return the Question Paper along with the Answer Paper to the Supervisor before leaving the Examination Hall.

SECTION I

No.	Question/ Answers
01	The common disaccharide sucrose contains which of the following monosaccharides?
(a)	Glucose and Fructose
(c)	Glucose and Mannose
(b)	Glucose and Galactose
(d)	Glucose only
02	The chemical groups on the surface of an antigen against which antibodies are produced are referred to as:
(a)	Complimentary sites
(c)	Antigenic determinants
(b)	Lymphokines
(d)	Reagins
03	Which one is a C4 Plant?
(a)	Papaya
(c)	Potato
(b)	Pea
(d)	Maize/ Corn
04	Based on the number of species, which is the largest Phylum of the Animal Kingdom?
(a)	Arthropoda
(c)	Mollusca
(b)	Protozoa
(d)	Chordata

05	What is the positional arrangement of the parts of a flower in the bud called?			
	(a)	Aestivation	(c)	Pattern
	(b)	Elevation	(d)	Topology
06	Which of the following is a qualitative character of community?			
	(a)	Physiognomy	(c)	Density
	(b)	Frequency	(d)	Dominance
07	Which tissue does the megaspore mother cell originate in?			
	(a)	Endosperm	(c)	Tapetum
	(b)	Nucellus	(d)	Synergids
08	In an immunoglobulin, L chain is attached to H chain by:			
	(a)	Hydrogen bonds	(c)	Disulphide bonds
	(b)	Covalent bonds	(d)	Hydroxyl bonds
09	Ring Test in Serology is:			
	(a)	Used to quatitate particulate antigen	(c)	Used to determine allergen sensitivity
	(b)	Used to detect the presence of soluble antigens	(d)	An example of agglutination Test
10	Eukaryotic transcription requires			
	(a)	RNA polymerase	(c)	Enhancer, Transcription factors
	(b)	Promoter	(d)	All of the above
11	Multicoloured Maize is produced due to			
	(a)	Insertions	(c)	Transposons
	(b)	Duplication	(d)	Deletions
12	Cold-Aglutinin Test is employed for the detection of antibodies to:			
	(a)	Mycoplasma	(c)	Chlamydiae
	(b)	Epstein Barr Virus	(d)	Adeno Virus
13	During composting maximum degradation and stabilisation of organic matter occurs during which stage?			
	(a)	Mesophilic	(c)	Cooling
	(b)	Thermophilic	(d)	Starting
14	Which of the following is not an antibody?			
	(a)	Precipitin	(c)	Agglutinin
	(b)	Complement	(d)	Antitoxin

15	The membranous labyrinth is concerned with	
(a)	Balancing	© Balancing and Hearing
(b)	Hearing	(d) Sound producing
16	Which of the following contribute to Carbon Cycle?	
(a)	Photosynthesis	© Respiration
(b)	Fossil fuel combustion	(d) All of the above
17	Which of the following compounds accumulates in Phenylketonuria?	
(a)	Phenylpyruvate	© Pyruvate
(b)	Tyrosine	(d) Alanine
18	At present, maximum greenhouse contribution to Earth's temperature is by	
(a)	CFCs	© H ₂ O
(b)	CO ₂	(d) CH ₄
19	Fried Egg colonies are seen in the culture of	
(a)	Mycoplasma	© Leptospira
(b)	Haemophilus	(d) Chlamydiae
20	N-linked oligosaccharides in Glycoproteins are covalently linked to the protein through	
(a)	Lysine	© Asparagine
(b)	Serine	(d) Threonine
21	Which of the following statements is false?	
(a)	Valine has a hydrophobic chain	© Proline is an amino acid
(b)	Serine has hydroxyl group in its side chain	(d) Lysine has a negatively charged side chain
22	The equation $x^2 + y^2 + 4x + 6y + 13 = 0$ represents	
(a)	a point	© a pair of two distinct lines
(b)	a circle	(d) a pair of coincident lines
23	Botulinum is a powerful	
(a)	Haemolysin	© Neurotoxin
(b)	Exfoliate toxin	(d) Antitoxin
24	Threshold Limit Value (TLV) for a pollutant is normally mentioned for an exposure of	
(a)	One hour per day	© 12 hours per day
(b)	Eight hours per day	(d) Six hours per day

25	The concept of survival of the fittest was first given by		15
	(a) Spencer	(c) Oparin	
	(b) Darwin	(d) Haeckel	
26	Which of the following is Pythagorean triplet?		16
	(a) (1,1,1)	(c) (4,5,6)	
	(b) (3,4,5)	(d) None of the above.	
27	Which physical property allows lipids to form membranes?		17
	(a) Flexibility	(c) High reactivity	
	(b) Amphipathy	(d) Binding to proteins	
28	In spectrophotometry, which law is used as the basis of this analytical technique?		18
	(a) Kirchoff's Law	(c) Fleming's Law	
	(b) Beer's Law	(d) Markonikow's Law	
29	Which of the following is not a Greenhouse gas?		19
	(a) Carbon-di-oxide	(c) Carbon Monoxide	
	(b) Nitrogen	(d) Nitrogen	
30	The curry leaf plant belongs to the same family as:		20
	(a) The Mango	(c) The Periwinkle	
	(b) The Orange	(d) The Mahogany Tree	
31	Triploidy is seen in		21
	(a) Grapes	(c) Watermelons	
	(b) Tomatoes	(d) All of the above	
32	RNA Polymerase I is required for transcription of		22
	(a) rRNA Gene	(c) tRNA Gene	
	(b) DNA Gene	(d) All of the above	
33	Plague is caused by		23
	(a) <i>Yersinia</i>	(c) <i>Pasteurella</i>	
	(b) <i>Frasnscisella</i>	(d) <i>Edwardsiella</i>	
34	The Blood Group "AB" is expressed by		24
	(a) Recessive Genes	(c) Dominant Genes	
	(b) Co-dominant Genes	(d) None of the above	
35	Topiary is a term used for:		25
	(a) Growing bees	(c) Channeling water	
	(b) Sculpting plants into exotic shapes	(d) Afforestation	

